THE AMERICAN JOURNAL of PSYCHIATRY

VOLUME 102
NUMBER 5
MAR. 1946

Convention Number

Annual Meeting
May 27, 28, 29, 30, 1946
Palmer House Hotel
Chicago, Ill.

Official Organ of
THE AMERICAN PSYCHIATRIC ASSOCIATION

THE HISTORY OF THE MALARIA TREATMENT OF GENERAL PARALYSIS

JULIUS WAGNER-JAUREGG, M.D.

Late Professor of Psychiatry and Neurology of the University of Vienna

COMMENT AND TRANSLATION FROM THE GERMAN

WALTER L. BRUETSCH, M.D.,* INDIANAPOLIS, IND.

In an editorial of the *Journal of the American Medical Association* of April 8, 1944, it is stated that priority for the use of malaria and relapsing fever in the treatment of general paralysis (dementia paralytica) should belong to Rosenblum. This editorial statement is based on the publication by Zakon and Neymann, entitled, "Alexander Samoilovich Rosenblium, His Contribution to Fever Therapy" (*Arch. Dermat. & Syph.*, 48: 52, 1943).

Enthusiasm over the beneficial effect of fever in psychoses was common among psychiatrists of the middle of the last century. Several papers on this subject, some of which were quoted by Neymann and Zakon, had appeared a decade before the communication of A. S. Rosenblum was published in 1877. It is true that Rosenblum inoculated a group of mental patients with relapsing fever, but he did not continue this mode of treatment and there was no fever therapy, as we know it today, until Wagner-Jauregg on August 31, 1918, published the results of the studies on the first patients with dementia paralytica, who had been treated a year previously with inoculation malaria.

The merit of Wagner-Jauregg was that he soon realized that the beneficial effect of fever was restricted to cases of dementia paralytica. For over 20 years he then focused all his efforts on this type of mental illness, using tuberculin, typhoid vaccines and even streptococci of erysipelas to produce fever.

Wagner-Jauregg was well aware of the work of Rosenblum. I have in my possession a manuscript by Wagner-Jauregg, entitled, "The History of the Malaria Treatment of General Paralysis," which was written by him for a monograph dealing with the malaria therapy of neurosyphilis. The publication of the monograph has been postponed several times because of other important work. Later the war intervened. It is now doubtful whether the monograph will appear at all.

Wagner-Jauregg died October 1, 1940. In 1927 he was awarded the Nobel Prize for his work in the use of malaria fever in the treatment of dementia paralytica. He was the first and so far the only psychiatrist to have been the winner of this prize.

"The History of the Malaria Treatment of General Paralysis," written by him in August 1935, is a valuable document. For the benefit of future medical historians, Wagner-Jauregg's version in this matter is published.

THE HISTORY OF THE MALARIA TREATMENT OF GENERAL PARALYSIS

JULIUS WAGNER-JAUREGG, M.D.

It is a great pleasure to contribute to this monograph the chapter on the History of Malaria Therapy. I can add a few interesting details and also will take this opportunity to correct erroneous statements which have been made on this subject.

The origin of the malaria treatment of general paralysis of the insane goes back to the centuries-old observation that mental patients following an incidental febrile disease occasionally show great improvement, which may go on to complete recovery. After having made similar observations, I proposed in 1887 in a publication(1) to produce intentionally febrile diseases as a treatment method for psychiatric patients. I had in mind malaria and erysipelas. Either one of these conditions could be transmitted to

* Clinical Professor of Psychiatry and Neurology, Indiana University School of Medicine; Clinical Director and Head of the Research Department, Central State Hospital, Indianapolis, Ind.

other individuals without great danger. Already at that time I did not share the prevalent idea that elevated temperature is the main factor which is responsible for the favorable results of this mode of therapy. I said: "Some authors are inclined to attribute to the fever, *i. e.*, to the increase in body temperature a particular effect upon the mental condition. This theory may possibly be correct in those cases in which an improvement of the mental symptoms takes place during the fever. But this view is certainly not justified in those instances in which the improvement of the mental symptoms sets in after the febrile disease is terminated, for instance, in typhoid fever during the period of reconvalescence or in erysipelas in the stage of desquamation. And it is in this group that the greatest number of permanent recoveries occur. Furthermore, in not a few instances the mental symptoms become worse during the period of fever."

Being anxious to have my proposals put into practice, I infected several mental patients—among these were no general paralytics—with a culture of the streptococcus of erysipelas, which had proven to be very virulent in a patient with an inoperable carcinoma of the breast. But in my patients neither erysipelas nor fever developed. There was only slight redness at the site of inoculation, which disappeared after a few days.

The experiments were discontinued because, in the meantime, I had been appointed professor of psychiatry at the University of Graz (Austria). Furthermore, medical science of that period looked with disfavor at experimentation on human beings. This spirit showed itself openly in the hostile attitude of the public and of the authorities when Hirschl(2) inoculated 9 general paralytic patients with syphilis. Today this would be a matter of course, but at that time the teaching of Fournier of the syphilitic etiology of general paralysis had not been generally accepted. Hirschl almost went to prison for his zealous scientific endeavors.

With the development of tuberculin in 1890 by Robert Koch, a substance was at hand with which one could produce fever without resorting to an infectious disease. I began treating patients of the Psychiatric Clinic at Graz (Austria) with injections of tuberculin. These experiments also had to be stopped prematurely because tuberculin was soon considered a dangerous preparation. For several years tuberculin was banned from good medical practice. It had almost become a crime to use it. At this time I was called to Vienna as the head of the University Hospital for Nervous and Mental Diseases. The vehement dispute over the use of tuberculin was calming down and its value was slowly recognized. In 1896 I resumed the experimental work with tuberculin fever, and a year later reported my experiences(3). I reiterated in this paper my previous statement that elevated temperature is not the fundamental factor of the treatment.

The experiments with tuberculin, using all types of mental patients, were continued. Many therapeutic successes were observed in patients who fell in diagnostic groups which have a high percentage of spontaneous recoveries. It was therefore difficult to evaluate the exact effect of this treatment method. Among the apparently cured patients, however, were a few cases of general paralysis. This was something unusual and attracted my attention. From this time on the main interest was focused on general paralytic patients. First, a comparative study was carried out to determine whether tuberculin really influenced the course of general paralysis in a favorable way. Sixty-nine general paralytics were given bouts of fever by injecting increasing doses of tuberculin until a dose of 0.1 was reached. They were compared with 69 patients who remained untreated. The same experiment was repeated with a group of 60 general paralytics, receiving tuberculin injections until the amount of 0.3 was given(4). Four years later the tuberculin-treated patients were compared with those who were left untreated. The result was that the general paralytics who were given tuberculin fever had more and better remissions and also a longer duration of life(5). In the meantime I had begun treating with tuberculin general paralytic patients of my private practice, using doses up to 0.3 and later up to 1.00. These cases were, as a rule, not as far advanced as the hospital patients. At the same time I combined the tuberculin injections with mercurial inunctions, because

I never could convince myself that specific anti-syphilitic treatment of general paralysis was without any value whatsoever, a view held by most psychiatrists of that period. With this combined tuberculin-mercury treatment, a complete remission was obtained in quite a few instances with the return of the patients to their former occupation. A report of this work was made in 1909 at the International Medical Congress in Budapest(6).

The tuberculin-mercury therapy of general paralysis, however, was never widely used. The medical scientists of that period were hypnotized by the discovery of the syphilitic etiology of general paralysis and could see the solution of this special problem only in a specific treatment. And yet in 1909 and later the tuberculin-mercury treatment gave better results than any other form of therapy. Today several cases of general paralysis are still alive which were successfully treated with tuberculin and mercury in the second decade of 1900. The number of full remissions in early cases was by no means small. But the relapses were frequent, and only a small number of the complete remissions remained permanent. To make the treatment more effective, I searched for other means. I tried various vaccines, and finally used typhoid vaccines which, when injected intravenously, produced marked febrile reactions. In addition, I replaced mercury by the recently introduced salvarsan. In 1913 I still hoped to work out a satisfactory treatment method without having to resort to the use of inoculation with malaria. In the same year I received a letter from Dr. E. van Dieren of Amsterdam asking me what I thought of the idea of inoculating with malaria general paralytic patients. As a family doctor he had recommended this procedure on several occasions, but the specialists had advised against it. I wrote him to make such experiments which, in my opinion, should be very promising. I added that I might try it myself, if my hopes of treating general paralysis more successfully with typhoid vaccines and salvarsan should not materialize. Dr. van Dieren to my knowledge never inoculated patients with malaria.

The psychologic moment which induced me to try malaria inoculation was prompted by the following incident. A prominent oil-well engineer was admitted to the Psychiatric Hospital with symptoms of incipient general paralysis. He was given treatment consisting of a combined course of typhoid vaccines and arsphenamines. He recovered to such a degree that he was able to return to the province of Galicia, where he was supervising the drilling of oil-wells. However, several months later he was back in Vienna with all the manifestations of general paralysis. I realized that with the methods of treatment at hand little could be accomplished and that the disease would now rapidly progress to the inevitable fatal outcome. (This was the same engineer whom de Kruif(7) had mentioned in his book.) It was the tragic outlook for this man which again forced on my mind the thought of producing intentionally an infectious disease in general paralytic patients. In addition, other evidence had accumulated that the original idea might well be justified, to produce artificially an infectious disease in these patients. During my work with tuberculin fever I had noted that those patients who by incident developed an abscess, a phlegmonous cellulitis, lobar pneumonia, or a tuberculous infection had frequently the best and most prolonged remissions.

At about the same time, in June 1917, when the hospital was full of wounded military personnel, my assistant Dr. Alfred Fuchs reported to me one morning that a slightly injured soldier had been admitted with chills and fever, apparently having contracted malaria fever on the Balkan front line. "Should he be given quinine?" he asked. I immediately said: "No." This I regarded as a sign of destiny. Because soldiers with malaria were usually not admitted to my wards, which accepted only cases suffering from a psychosis or patients with injuries to the central nervous system. I gave the order to make a blood smear and to examine for malarial parasites. At the same time I asked a shell-shocked soldier, who was very useful for doing odd jobs, to catch all the mosquitoes he could find on the hospital grounds. He returned with a great number of them, and I convinced myself that all the mosquitoes belonged to the species of culex. There were no anopheles in this random sample.

The examination of the blood smear of the soldier with chills and fever had revealed the presence of malarial parasites of the tertian type. It was June 14, 1917. On that day I obtained during a paroxysm a small sample of the soldier's blood, and I inoculated 3 general paralytic patients by rubbing a few drops into several superficial scarifications of the skin. Then the malaria of the soldier was stopped with quinine.

Of the 3 inoculated patients only 2 developed malaria. Additional cases were inoculated subcutaneously with blood obtained from the veins of the originally inoculated general paralytic patients, who by this time were ill with malaria fever. Altogether 9 general paralytics were inoculated in the summer of 1917. Then the inoculations were discontinued because I wanted to see whether this experiment would prove to be a real therapeutic success.

A year later malaria therapy was resumed. This time malaria blood for inoculation was obtained through the courtesy of the physician-in-chief of the ward for malaria patients, who were mostly soldiers from the Balkan armies. Of 4 inoculated patients 3 succumbed to malaria. Soon after inoculation it became apparent that estivo-autumnal parasites (malaria tropica) had been hidden in the strain of tertian malaria and had been used for the inoculations. After this misfortune no new cases were inoculated until September 1919, when Dr. Doerr (now professor of public health and hygiene at the University of Basel, Switzerland) furnished the clinic with an unquestionable strain of tertian malaria. From that time on malaria therapy has been practiced uninterruptedly at the Psychiatric Clinic of Vienna. The malaria strain of September 1919 has been maintained up to the present day—more than 16 years—in continuous human passage. I do not know of any other strain in the world which has been used for so many years. Not even the strain of the New York Psychiatric Institute, which has been maintained for 9 years, from 1923 to 1932, at the time of the report by Kopeloff, Blackman and McGinn(8), can compete with the record of the Vienna strain.

I have been asked how my inner feelings were during the first days and weeks which followed the first inoculations with malaria. My emotional life at that time and already during the era of the tuberculin experiments has been described by de Kruif somewhat more turbulent than it actually was. The unusual experiment of human malaria inoculations moved me very little. From the previous work I was accustomed to seeing remissions following fever treatment, and the measure of success which might be obtained by the malaria experiment could not be anticipated. Furthermore, we were already in the third year of the war, and its emotional implications became more manifest from day to day. Against such a background a therapeutic experiment could stir me little, in particular since its success could not be foreseen. What meant a few paralytics, who could possibly be saved, in comparison to the thousands of able-bodied and capable men who often died on a single day as the result of the prolongation of the war.

How sceptical I was toward the early successes with the malaria treatment is shown by the fact that I waited a year until the publication of the first report. Very likely I would have hesitated even longer, if the editor of the *Psychiatrisch-Neurologische Wochenschrift,* in which my preliminary communication appeared(9), had not urged me to make a contribution for the *Festschrift* in honor of my friend Dr. Anton, professor of psychiatry at the University of Halle (Germany).

I must add here that already in 1917 malaria therapy was followed up with arsphenamine injections in the same way as salvarsan had previously been given as an adjunct to the tuberculin treatment. It was difficult to convince even the co-workers of my own clinic of the soundness of the combined treatment, and I had to defend vehemently this principle in scientific discussions, until it was generally recognized. Today barely anyone doubts the correctness of this procedure.

Now one may ask the question: Were the inoculations of the summer of 1917 the first attempts of this sort ever made? Sometime after the malaria treatment had spread from Vienna to every corner of the world, I became aware that a French physician, Dr. Émil Legrain, several years previously had advocated in a publication the use of therapeutic malaria inoculations. On my

desk lies a book by this author, consisting of 612 pages. It was published in 1913 by Maloine in Paris and is entitled: "Traité clinique des fièvres des pays chauds." In the last 12 pages of the book, which deals mainly with the intermittent fevers, the author states that malaria frequently has a good effect upon other diseases. He asserts that it is but a step from this knowledge to the actual use of malaria as a therapeutic means, and he claims to have taken that step. He reported on 13 cases which he had inoculated with malaria followed by beneficial results. Among these were no cases of general paralysis. The group consisted of 2 patients with malignant syphilis, 1 case with luetic ulcers, 4 patients with pulmonary tuberculosis, 1 with an abscess of the testicles, a case with a slow healing wound, an obstinate general eczema, an arthropathy of the knee, and 2 cases with syphilis of the liver. He also recommended inoculation with quartan malaria in the following instances: inoperable carcinoma, tuberculosis of the larynx, tuberculous meningitis, sleeping sickness, epilepsy, certain forms of melancholia, incipient general paralysis and tabes.

It is astounding that such proposals, although no one had taken them up, were forgotten so completely that they entirely should have been lost sight of by contemporaries, when the malaria therapy of general paralysis became known. Even in France, where Pagniez in 1920 without much response directed attention to the malaria treatment and whose article in *La Presse Médicale* of May 30, 1925, finally was responsible for its introduction in Paris, the name of Legrain was not mentioned in spite of a rapidly increasing literature on malaria therapy. (Malaria treatment found its way to Paris via Brussels.) In 1931, I became acquainted, for the first time, with my predecessor Legrain from the introduction to the book by Leroy and Médakovitch(10).

Now I acquired Legrain's book and after having read it, I realized why he had been so completely forgotten. Legrain was evidently an individual given to vagaries, who in 1913 still held concepts on malaria which were utterly antiquated. He ridiculed Laveran with his plasmodia and Donald Ross with his mosquitoes and scorned the use of quinine. Legrain was not taken seriously, there was no one who believed in his successes, and soon he faded from the memory of his colleagues.

It is not in accordance with facts, when Riser(11) makes the statement that since 1910 Legrain had systematically inoculated general paralytic patients with malaria. Legrain has never infected general paralytics with malaria, nor has he treated in a systematic way with inoculation malaria other diseases.

In the literature Rosenblum is usually credited with being the first who inoculated general paralytics for therapeutic purposes, using recurrent fever and not malaria. The facts, however, are that Rosenblum has never inoculated his patients with the idea of treating their mental illness. What he did was to make available his mental patients—among whom were no general paralytics—to the bacteriologist Motschutkoffsky, who in Odessa in the year of 1876 studied the transmissibility of recurrent fever to human beings. Subsequently, a few of these patients recovered from their psychoses and Rosenblum reported this later under an assumed name(12). Rosenblum never continued these experiments.

The suggestion to treat mental cases with malaria was really made by Raggi(13) in 1876, but he never put this idea into practice. Indirect malaria therapy was carried out by Galloni, director of an Italian mental institution, who withheld quinine in psychotic patients who incidentally had contracted malaria because he had observed that such mental patients frequently recovered from their psychoses.

BIBLIOGRAPHY

1. Wagner, J. Ueber die Einwirkung fieberhafter Erkrankungen auf Psychosen. Jahrb. f. Psychiat. u. Neurol., **7**: 94, 1887.

2. Quoted by Krafft-Ebing, von, R. Arbeiten aus dem Gesamtgebiet der Psychiatrie und Neuropathologie, II. Heft, Leipzig, J. A. Barth, 1897, pp. 12-14. Hirschl is the anonymous person in this paper by Krafft-Ebing.

3. Wagner v. Jauregg. Psychiatrische Heilbestrebungen. Wien. klin. Wchnschr., **8**: 155, 1895.

4. Pilcz, A. Ueber Heilversuche an Paralytikern. Jahrb. f. Psychiat. u. Neurol., **25**: 141, 1905.

5. Pilcz, A. Zur Tuberkulinbehandlung der Paralytiker. Psychiat.-neurol. Wchnschr., **11**: 431, 1910.

6. Wagner v. Jauregg. Ueber die Behandlung der progressiven Paralyse. Wien. med. Wchnschr., **59**: 2124, 1909.

7. de Kruif, P. Men against death. 9. Wagner-Jauregg, The friendly fever. New York: Harcourt, Brace and Company, 1932, p. 249.

8. Kopeloff, N., Blackman, N., and McGinn, B. "Asexualization" of the plasmodium in induced malaria. Am. J. M. Sc., **184**: 262, 1932.

9. Wagner v. Jauregg. Ueber die Einwirkung der Malaria auf die progressive Paralyse. Psychiat.-neurol. Wchnschr., **20**: 132 and 251, 1918/19.

10. Leroy, R., and Médakovitch, G. Paralysie générale et malariathérapie. Paris: G. Doin & Cie., 1931.

11. Riser. La prophylaxie de la syphilis nerveuse et l'organisation d'un centre régional de malariathérapie. Prophylax. antivén., **3**: 507, 1931.

12. Oks, B. Ueber die Wirkung fieberhafter Krankheiten auf Heilung von Psychosen. Arch. f. Psychiat., **10**: 249, 1880.

13. Raggi, A. Il processo febbrile nei pazzi. Riv. clin. di Bologna, **6**: 163, 1876.

A THREE-YEAR SURVEY OF ELECTROSHOCK THERAPY

Report on 276 Cases; Comparative Value of Insulin-Coma Therapy

ALEXANDER GRALNICK, M.D., Central Islip, N. Y.

Electroshock therapy has become firmly entrenched in the psychiatrist's armamentarium in the relatively short time since its introduction. Generally, a new form of treatment gains so rapid and widespread a use when medical science finds itself hopelessly dealing with a disease which is both malignant and obscure in its origins, as is the case with mental illness. When previous therapeutic efforts have been either largely fruitless, or surrounded with great difficulties, the introduction of a new technique is very welcome, especially when it is easy to use, is attended by few complications and produces good—and sometimes spectacular—results. The natural tendency under such conditions is to give the procedure an extensive trial. The new rapidly displaces the old, and other forms of treatment are de-emphasized or discarded—as has been the case with insulin and metrazol shock therapy.

It was with a moderate degree of enthusiasm and scientific curiosity that electroshock therapy was undertaken at Central Islip State Hospital. Our original plan was to act as a testing ground, and consequently many were treated without too much discrimination. However, one principle was maintained. All the patients were treated individually, according to their clinical response and the therapist's impression of them. No special formula was followed regarding number of treatments or grand mals to be given. For instance, when a patient showed little or no change the treatment was not extended unduly, especially if physical complications were feared. However, if there was some ray of hope, or the patient endured the seizures well, the treatment was pressed. Thus it was expected that with this rather random choice, two series of cases would emerge—one given relatively few treatments, and one given a greater number. It should be said, however, that as time elapsed it was more and more firmly felt that extended courses of treatment were of no avail, and that good clinical responses were made within the first 12 to 15 treatments or hardly ever at all. In the greatest majority of cases, treatment was given three times a week, the generally accepted routine was followed and the usual precautions taken.

A total of 276 patients was treated in the three year period ending June 1, 1945. Although 75% of these were cases of schizophrenia, a sufficiently large number was treated in the other categories to make their results significant, and interesting comparisons possible.

In addition to the type of illness, the age, the number of treatments and type of reaction, and the percent paroled were considered significant factors for study. Patients paroled were in what would generally be called "improved," "much improved" and "recovered" states. Final judgment of their condition was made within four to six weeks to allow for the subsidence of the "organic syndrome" when it occurred. Any marked improvement which occurred after this interval was not—and should not be—considered as necessarily related to the treatment itself. While some patients may not have had too good an insight into the nature of their illness when released, none was considered in any way deluded or hallucinated. The writer believed that each could make a fair to excellent adjustment at his previous duties in society.

It is generally accepted that response to shock treatment is best in patients ill less than one year. As the duration of illness increases, the remission-rate decreases. This is particularly true for the schizophrenias. Consequently, in determining these results, the patients were arranged in two groups—one ill less than a year, and the other for a longer time. The findings are always better in the first group.

Twenty-nine cases of involutional psychosis, melancholia, were treated. Eighteen of them were ill less than a year, received an average of 11 treatments, and had a parole-rate of 94%. The other 11 were sick

more than one year, received an average of 14 treatments, and had a parole-rate of 82%. The average parole-rate for the 29 cases was 90%.

The cases of involutional psychosis, paranoid type, hardly respond as well. Of the 15 treated, 10 were ill less than a year, received an average of 12 treatments, and had a parole-rate of 60%. The average parole-rate for the 15 cases was 47%—markedly lower than the 90% for the type melancholia. Table 1 illustrates the findings in detail. All therapists find that the paranoid type responds less well, but have no satisfactory explanation. It is possible that a number so diagnosed are really cases of dementia præcox, paranoid type, in whom therapy is generally less effective.

Fourteen cases of the manic type were treated. Twelve had been ill short of one year, received an average of 15 treatments, and had a parole-rate of 91%. The average parole-rate for the 9 depressives was 89%, and that for the 14 manics 86%. It may be noted that the depressive type required significantly fewer treatments, and that the average age in the entire series of 23 cases was 41. Other details are shown in Table 2.

The differential diagnosis between the manic-depressive psychoses, particularly the depressive type, and the involutional psychoses is often difficult. This is true too, for the subtypes of the involutional psychoses themselves. As a consequence, errors in diagnosis may have been made in sufficient number to color the above results. In order to obviate this somewhat, the main groups may be handled as a whole, and then compared. A useful purpose also seems to be accomplished by this plan because the average age in each series is so similar that we may be dealing with more closely allied illnesses than one would be led to believe by the differentiation in classification.

Twenty-eight of the 44 cases of involutional psychosis had been ill less than one year. They received an average of 12 treat-

TABLE 1

AVERAGE		NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALS	NUMBER OF GRAND MALS
INVOLUTIONAL, MELANCHOLIA	ILL OVER ONE YEAR	11	82%	48	14	3	11
	ILL UNDER ONE YEAR	18	94%	50	11	3	8
	ALL	29	90%	49	13	3	10
INVOLUTIONAL, PARANOID	ALL	15	47%	51	13	4	9
	ILL UNDER ONE YEAR	10	60%	51	12	3	9
	ILL OVER ONE YEAR	5	20%	51	15	4	11

ments, and had a parole-rate of 82%. Twenty of the 23 cases of manic-depressive psychosis had been ill under a year. They received an average of 13 treatments, and had a parole-rate of 95%. In the group of involutionals the 16 patients ill over a year had a parole-rate of 63%. In the group of manic-depressives those sick more than a year had a parole-rate of 33%, but here the number treated is too small for serious consideration. The notable difference in the electroshock therapy is of great advantage for the emotional disturbances of middle life, especially since the average age of the manic-depressives in this series was 41 years.

While it is generally accepted that electroconvulsive treatment is the therapy of choice for the manic-depressive and involutional psychoses, there is still question about its value vis-a-vis insulin therapy in the treatment of schizophrenia. It seems worthwhile, therefore, to examine the results for

TABLE 2

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALS	NUMBER OF GRAND MALS
MANIC-DEPRESSIVE, DEPRESSIVE	ILL OVER ONE YEAR	1	0%	45	15	4	11
	ILL UNDER ONE YEAR	8	100%	41	11	2	9
	ALL	9	89%	41	11	2	9
MANIC-DEPRESSIVE, MANIC	ALL	14	86%	41	15	2	13
	ILL UNDER ONE YEAR	12	91%	40	15	2	13
	ILL OVER ONE YEAR	2	50%	50	16	7	9

parole-rates between the groups ill less and more than one year indicates that the duration of illness is a significant factor determining prognosis in these categories too. The over-all parole-rate for the involutional psychoses was 75% as compared to 87% for the manic-depressive psychoses. In both series an average of 13 treatments was given. (See Table 3).

The above results indicate the decided value of electroshock therapy in the affective psychoses, and emotional illnesses of middle life diagnosed involutional psychosis. Although the latter is usually considered "due to disturbance in endocrine function," there is reason to believe that it is mainly affective in nature, and on that assumption we can definitely conclude from the figures that the various types as well as the main entity of dementia præcox.

Of the 47 treated cases of dementia præcox, catatonic type, 20 had been ill less than a year and 65% of these were paroled, having received an average of 17 treatments. The remaining 27 cases had been ill more than one year. None of these could be paroled, though they received an average of 19 treatments. The average parole-rate for all was 28%, but the marked contrast between the groups is overwhelming evidence of the importance of early treatment.

The hebephrenic præcoxes responded poorly, regardless of the duration of illness. The average parole-rate for the 28 cases treated was 11%, even though the number

of treatments administered approximated that given the catatonic type.

Forty-two percent of the 52 paranoid præcoxes who had been ill less than a year could be paroled, but only 5% of the 82 ill longer than that could leave the hospital after treatment. The striking contrast again emphasizes the significance of the duration of illness in determining the prognosis. The average parole-rate for the 134 paranoid cases was 19%. As is the case with the other categories of schizophrenia, the parole-rate for the total number of patients, regardless of duration, is none too encouraging. However, the results with the catatonic and paranoid præcoxes who have been ill less than one year give us some cause for hope. (See Table 4 for details and comparison.)

The results just outlined are true for this particular hospital because the criteria for diagnosis of the subtypes of schizophrenia hold more or less in any one institution. However, a comparison with results from another hospital might show a wide variation because the standards for diagnosis differ. Patients who are generally called paranoid præcoxes in one hospital may be typed hebephrenic or catatonic in another, and vice versa. There is more likely to be agreement, however, on the main entity "schizophrenia." It seems wise, therefore, to examine the results for the cases of dementia præcox as a group.

Two hundred and nine cases of dementia præcox were treated. Eighty of this total were ill less than one year at the time of treatment. The parole-rate for this number was 45%, and 16 was the average number of treatments. The remaining 129 patients were ill longer than one year. Their parole-rate was a mere 5%, although they received an average of 17 treatments. The parole-rate for the entire series of 209 patients was 20%. The average age of both groups was practically the same.

It has been reported that better results are obtained when 20 or more treatments are given to cases of dementia præcox(7). Our statistics hardly bear out such a contention. On the contrary, they show again and again that the better results are obtained with fewer treatments. This holds for the schizophrenics as well as the others. For instance, 101 of the 209 præcoxes received an average of 20 treatments (between 16 and 36 applications), but only 10% of these could be paroled. On the other hand, 14 treatments was the average for the total of 42

TABLE 3

AVERAGE		NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALS	NUMBER OF GRAND MALS
INVOLUTIONAL PSYCHOSES, ALL TYPES	ILL OVER ONE YEAR	16	63%*	49	14	3	11
	ILL UNDER ONE YEAR	28	82%	50	12	3	9
	ALL	44	75%	50	13	3	10
MANIC-DEPRESSIVE PSYCHOSES, ALL TYPES	ALL	23	87%	41	13	2	11
	ILL UNDER ONE YEAR	20	95%	40	13	2	11
	ILL OVER ONE YEAR	3	33%	48	15	5	10

paroled patients. Further, the remaining 108 patients received an average of 13 treatments, but had a significantly higher parole-rate, namely, 29%. A similar situation exists for each type of schizophrenia, and one may almost predict, in any series of patients given what an experienced therapist deems sufficient treatment for each individual case, that those requiring 20 or more treatments will have a significantly lower parole-rate than those deemed to require fewer treatments.

A clearer picture of electroshock's merit in the treatment of the involutional and manic-depressive psychoses may be gained by handling them as a single series. We then find that of 67 patients, 48 had been ill less than a year, and of these 88% could be paroled after an average of 12 treatments. Of the remaining 19 who had been ill more than one year 58% could be released after an average of 14 treatments. This makes a parole-rate of 79% for the 67 patients diagnosed involutional and manic-depressive psychosis.

Interesting comparisons may now be made between the schizophrenic and "affective" psychoses by referring to Table 5. In the latter group the results are so overwhelmingly better all along the line, despite fewer treatments, that we may assume electroshock therapy to be the treatment of choice for the manic-depressive and involutional psychoses. Whereas only 5% of the præcoxes ill over one year could be released, 58% of the others ill more than one year could be paroled; whereas 45% of the præcoxes with the shorter duration could be sent home, 88% of the others could be released; and while only 20% of the total schizophrenics could leave the hospital, 4 times as many of the others gained a state of remission.

The ascendency of electroshock treatment

TABLE 4

AVERAGE		NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALS	NUMBER OF GRAND MALS
DEMENTIA PRAECOX, CATATONIC	ILL OVER ONE YEAR	27	0%	28	19	2	17
	ILL UNDER ONE YEAR	20	65%	30	17	2	15
	ALL	47	28%	29	18	2	16
DEMENTIA PRAECOX, PARANOID	ALL	134	19%	36	16	2	14
	ILL UNDER ONE YEAR	52	42%	37	15	2	13
	ILL OVER ONE YEAR	82	5%	36	16	2	14
DEMENTIA PRAECOX, HEBEPHRENIC	ILL OVER ONE YEAR	20	10%	32	17	3	14
	ILL UNDER ONE YEAR	8	13%	23	15	2	13
	ALL	28	11%	29	17	3	14

during the past few years has tended to diminish the enthusiasm of psychiatrists for insulin-coma therapy. The relative rapidity with which electroshock can be given, the few ward personnel required in hospital practice, and the ease with which it can be given in office practice have promoted its widespread use. In the past few years of war emergency, hospitals have instituted or enlarged electroshock therapy departments, præcox. Comparisons of results between hospitals are indicative rather than conclusive because of the numerous extraneous factors which enter to distort them. Among these factors are several differences: (1) in diagnosis and choice of patients for treatment, (2) in opinion about what constitutes a state of remission, (3) in the technical application of the treatment, (4) in the general approach to shock treatment and the

TABLE 5

	AVERAGE	NUMBER TREATED	PERCENT PAROLED	AGE	NUMBER OF TREATMENTS	NUMBER OF PETIT MALS	NUMBER OF GRAND MALS
DEMENTIA PRAECOX, ALL TYPES	ILL OVER ONE YEAR	129	5 %	33	17	3	14
	ILL UNDER ONE YEAR	80	45 %	34	16	2	14
	ALL	209	20 %	33	17	3	14
INVOLUTIONAL AND MANIC PSYCHOSES, ALL TYPES	ALL	67	79 %	47	13	3	10
	ILL UNDER ONE YEAR	48	88 %	46	12	2	10
	ILL OVER ONE YEAR	19	58 %	49	14	3	11

and surrendered their insulin treatment wards. In this process schizophrenic patients who ordinarily would have received insulin treatment have been either subjected to electroshock before getting insulin, or have been denied insulin treatment altogether. Consequently, the requirement of giving a patient some form of active treatment has been satisfied, without necessarily having given him the wisest choice of, or succession of treatments.

While we can already conclude that electric is the choice of treatment for the involutional and manic-depressive psychoses, we cannot by any means be as definite about its value for the schizophrenias. No comprehensive or convincing study has yet been made proving one or the other form of therapy superior in the treatment of dementia patients who receive it, and (5) in the personalities of the therapists.

At Central Islip State Hospital we have been able to overcome many of the distorting factors by maintaining a single department. In it both forms of therapy are administered at the same time by the writer, with the help of a relatively stationary ward personnel. The choice of patients, their treatment, and judgment of their final condition, as well as their release from the hospital are solely in his hands. Consequently the standards are well fixed. The only basic differences which exist are two: (1) one group of patients receives electroshock and the other insulin-coma therapy; (2) the electroshock patients are seen on the treatment-ward 3 times a week for roughly 3 hours whereas the insulin-treated patients are

seen 5 times a week for a period of 6 hours. Otherwise their recreation, diet and general management are much the same.

At the very time that the patients already reported on were receiving electroshock treatment, a series of patients received insulin-coma therapy under the régime described. A previous article(2) reported the results for this latter group. In a 2 year period insulin treatment was administered to 158 schizophrenics. The parole-rate was 52.5% for all the patients, regardless of the duration of illness. These results are far superior to the 20% parole-rate for the schizophrenics treated with electroshock. Eighty-five of the 158 patients had been ill less than one year. Their parole-rate was 57.6%, again significantly higher than the 45% for those ill a similar length of time and treated with electroshock. The remaining 73 patients had been ill more than a year, and had a parole-rate of 45%—9 times as great as that for the electroshock treated patients of the same duration. These results are shown in Fig. 1.

A further effort was made to determine the comparative value of insulin and electric treatment in schizophrenia by giving some patients insulin-coma therapy, and following it with electroshock if a remission was not produced within 2 months of the termination of hypoglycemic treatment. These particular patients were chosen more or less at random, except that, as a rule, the writer felt there was still some hope for the individual despite insulin-therapy's failure.

Fifty patients were managed in this way. Twenty-eight of them happened to be ill less than one year, even at the time electroshock therapy was undertaken. Their parole-rate was 29%, and they received an average of 17 treatments. The group was composed of 8 catatonics, 7 hebephrenics and 13 paranoids. Four of the first, none of the second, and 4 of the last type could be released.

Twenty-two of the 50 cases were ill more than a year at the time electroshock treatment was begun. None of them could be released, although an average of 18 treatments was administered. This group was composed of 1 catatonic, 4 hebephrenics and 17 paranoid præcoxes.

In the group of 50 who failed to improve with insulin, therefore, only 16% could be released after subsequent electroshock therapy. Half of the 9 catatonics, none of the 11 hebephrenics, and 13% of the 30 paranoids responded satisfactorily to this régime. All of those who could be released had been ill less than a year. Although the type of schizophrenia appears of some significance, only the catatonics reacting well, the duration-of-illness factor seems to be most significant here as elsewhere.

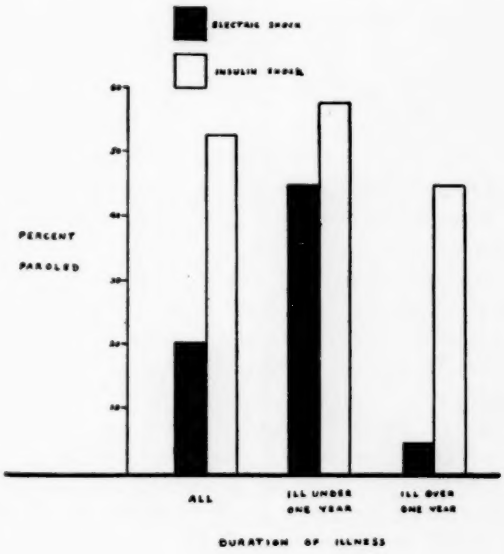

FIG. 1.

We may conclude from these results that, with the possible exception of the catatonics, the choice for schizophrenia is insulin-coma treatment. This is particularly true for patients ill more than one year. When these fail to respond to insulin therapy, further efforts with electroshock are generally palliative to the therapist and patient's relatives, rather than to the patient. It would seem worthwhile with catatonics—and possibly paranoids—who are ill less than a year, to resort to electroshock after insulin fails. At all events the results seem to indicate that until we have better criteria upon which to base our choice of treatment, insulin therapy should be tried first in all schizophrenics. The indiscriminate use of electroshock first (11), because it is easier to apply, wastes time which is an important factor determining the patient's ultimate response to insulin.

It is commonly reported in the literature that chronically disturbed schizophrenics are benefited by electroshock therapy. More exactly, it is held that such patients are at least more manageable after such treatment. For this reason we administered electroshock to 50 female patients from an outlying ward—one for the most disturbed patients in the hospital. These women had been ill from 2 to 10 years. They were first transferred to the shock therapy department and given an average of 16 treatments, after which they were returned to their former ward. Further observation was made by the doctor, nurses and attendants who had been familiar with their behavior before treatment. Six to twelve months later their opinions were recorded.

The descriptions fell roughly into 5 categories. First, patients who improved and continued to make a sufficiently good adjustment to warrant parole. There were 3 such cases. Second, those who improved a little for a short period, then became either worse or relapsed to their former state (11 cases). Third, those who appeared to be unchanged by the treatment (14 cases). Fourth, those who returned in a worse state, and remained so for several months before returning to their former level of behavior (7 cases). Fifth, those who seemed to become worse, and remain so indefinitely (15 cases).

The general impression that all the observers gained was by no means favorable. They felt that the bulk of patients became worse for shorter or longer periods, if not indefinitely, and described them as "more deteriorated," "more unreasonable," "more destructive and aggressive" and "more resistive and noisier." Those patients who began to eat after treatment seemed to "gorge" themselves.

The complications of electroshock therapy range from very mild to severe. Generally, headache, nausea and vertigo are immediate complaints. However, these are transitory. Amnesia usually occurs during a long course of therapy, and is ordinarily associated with confusion. Both are temporary, especially the latter, although occasionally we have seen clinical evidence of amnesia for four to six months after termination of treatment. Acutely excited patients often have memory defects, particularly for the early events and symptoms of their illness, even after a spontaneous remission. Consequently in such cases it is difficult to tell whether the amnesia is due to repression or the organic effects of the electroshock itself.

In addition to the above rather accepted complications, dislocation of the mandible is most common. However, it is relatively minor. As a rule the jaw adjusts itself in the last stages of the seizure or can easily be replaced by the proper application of downward pressure to the lateral aspects of the rami. Fractures in this series of cases were uncommon. Roentgen examinations of the spine were done on all who complained of pain. It was necessary to x-ray 34 patients, but none was found to have a vertebral fracture. Some may have been missed in this procedure, but it is likely that very few if any occurred. However, the fact that these fractures are never serious makes routine x-ray series unnecessary. Further, the use of curare would seem unnecessary except where specifically indicated to "soften" the seizures. One undernourished patient suffered a fracture of the neck of the left femur, and 2 others sustained dislocations of the shoulder.

Fatalities occurred in 4 patients. The first died in a hyperpyrectic state one week after a course of 14 treatments. Autopsy was not done. The second died after two treatments, and was found to have syphilis of the central nervous system, despite a negative serology. A third died after two treatments, and was found to have a silent brain tumor. These cases have been reported for the literature(3, 4). The fourth patient developed a volvulus two days after her fifth treatment and died quickly. While it should be said that not all these deaths were directly due to electroshock, they do indicate that in a large series of cases fatalities are to be expected for one reason or another. Advanced age and pre-existing organic brain disease are the most common findings in those so far reported in the literature.

DISCUSSION

The results of this survey indicate that electroshock may be seriously considered as an effective therapy in the management of

mental illness. However, they also indicate that the treatment has certain definite indications and limitations. It is not a panacea for all types of psychoses, no more than insulin-coma therapy is the answer for all cases of dementia præcox. Its indiscriminate use, therefore, would seem undesirable, except for purely investigational reasons.

Electroshock therapy is the choice of treatment for the involutional and manic-depressive psychoses, or, broadly speaking, for the "affective" illnesses. It is, more exactly, as this survey shows, the elective treatment for the "middle-life" psychoses. In addition, it appears quite effective in cases of dementia præcox occurring for the first time in the late 30's and early 40's when a good affective reaction is present. In these latter cases one is usually a little undecided about the diagnosis, and symptoms strongly suggestive of involutional psychosis are present.

Electrotherapy seems to have some merit in the general treatment of dementia præcox. It is most effective with the catatonic, less so with the paranoid type, and hardly so with the hebephrenic. In this category the duration-of-illness is extremely important, the therapeutic results declining in a startling manner with patients ill more than one year. This holds true for the catatonic type, as well as for the others.

Although the results with electric treatment in schizophrenics ill less than one year approach those for insulin-coma therapy, they are yet significantly lower in the above reported series. Further, it has yet to be shown that a representative series of præcoxes improved with electroshock remain well for as long a period as a similar series improved by insulin therapy. Judging from the essential nature of schizophrenia, it would seem that such a demonstration should be made before we even begin to seriously consider electroshock as a substitute for insulin-coma therapy.

At first glance, one suspects that the greater amount of time, energy and care given to an insulin-treated patient would fortify him more than the patient allotted the relatively less attention required in the course of electroshock treatment. One would therefore expect better and longer remissions with the former group. Such added attention may help account for the markedly better results obtained with insulin in patients ill more than one year. One report(6) suggests that just such factors may be responsible for the fact that private patients make a better response to electroshock than do clinic cases. It may very well be that the basic nature of the insulin-treatment-situation answers a need in those sick a long time that enables them to improve, and thus accounts for the great discrepancy between the results for electric and insulin treatment in such cases. If this could be demonstrated more adequately it would prove the therapeutic importance of the human factor, and would indicate the need of patients, particularly præcoxes, for fellow human beings. It may be suggested that individuals who are drastically denied the comfort that comes from good relations with other people gradually are overcome and withdraw into a state of mind we term schizophrenia.

Outstanding is the fact that the treatment is beneficial in cases of short duration. This finding stands out with monotonous regularity. In considering electric treatment for a patient one is tempted to ask "how long" he is sick before determining any other fact, including the diagnosis. This is especially true for cases of schizophrenia, less so for the involutionals and manic-depressives. Although there are other prognostic criteria, none is as important as the duration. Gold and Chiarello(1) have made a valuable attempt to arrive at a more scientific choice of patients. However, even if a patient exhibits all of the criteria they describe for a good outcome, but does not have an illness of short duration the ultimate prognosis is poor. On the other hand, if a patient has been ill a short time the prognosis is good, despite the fact that other clinical features may not be present to forecast a promising result.

In another article(5) the writer has attempted an explanation of the importance of the duration-of-illness factor. Why should a schizophrenic who is ill less than one year respond so relatively well while another ill a longer time responds so poorly, if at all? Certainly we know of no organic reason. No structural changes appear with the progress of our "functional" illnesses to account for the discrepancy in results, and

one may question any statement that the treatments are effective solely because physiological changes are produced in the brain. We are hardly aware of what happens in the brain with electric treatment, and in the case of insulin-coma therapy no causal relation between the decreased cerebral metabolism and the therapeutic effects has been shown. On the other hand, one may ask, what is the psychological change that occurs in a treated case of short duration that allows him to improve? What causes such a fixity of the psychosis as time passes that we are left helpless to overcome it? It begins to appear to the writer that perhaps only certain personality-types respond to shock therapy, and that we have been following the wrong track by merely trying to prognosticate the value of treatment in each case on the basis of descriptive symptoms alone. Certainly the wide variety of "descriptive pictures" that respond well would automatically raise that point. What then is the nature of the personality or character-structure of the patients who do benefit? Would such information help us in understanding the etiology of psychoses, and aid in forestalling them by revealing possible prophylactic measures? If the psychoses are purely functional why do they respond so rapidly in the presence of physiological changes produced by "shock" therapy, and so slowly, if at all, to psychotherapy? It does not seem sufficient to say that such changes help the patient make a psychological adjustment? What are the intermediary steps? What, in other words, are the true dynamics that operate in the improvement?

As a general rule, it can be taken for granted that any schizophrenic who has been ill for well over a year will not respond to electroshock once he has failed to reach a state of remission with insulin-coma therapy. However, it is a fact that roughly one-third of those ill less than a year who have failed with insulin will be improved by electric shock. Even better results are obtained with catatonics so treated, but it must be remembered that this category responds well to electric treatment anyway. At any rate, why some few should do well with electroshock, having failed to improve with insulin, is a question for further investigation.

Weil and Moriarty's(11) advocacy of the indiscriminate use of electroshock first in *all* cases of schizophrenia is to be decried. More particularly their report indicates instead (1) that electroshock is without value in schizophrenics of long duration, whereas insulin therapy is, (2) that when electric treatment is unsuccessful in cases of short duration, subsequent insulin treatment is even more effective than it is in cases of long duration who have failed with electroshock.

While we have found several good prognostic criteria in judging patients for treatment, the results do not warrant a sanguine attitude. The results with electroshock, for instance, in the *choicest* type of schizophrenic show a 45% remission-rate. Are we justified in treating all of the patients, thereby subjecting them to a violent form of therapy whose full effects we have not yet adequately evaluated, in order to get less than half temporarily well? Indiscriminate treatment is not in the best scientific spirit. Keener and more discriminate choice of patients for treatment would now seem to be in order.

Courses of therapy which are extended beyond 12 to 15 treatments quite generally fail to produce a remission. This is the invariable experience with involutionals and manic-depressives. Our results with the schizophrenics tell the same story and confirm the findings of others(8, 9, 11). Those præcoxes who respond, do so quickly—though not quite as rapidly as the involutionals—and stay well even with less than 12 to 15 treatments. However, when the therapy must be prolonged the outlook is poor indeed, and any improvement is short lived. This was our experience with insulin too. When a "remarkable" improvement occurs in a schizophrenic after 1 or 2 treatments with electroshock, the ultimate prognosis is poor. It usually takes 6 to 10 treatments to produce a change that maintains itself after a total of 12 to 15 treatments have been given. However, it is not always essential that 15 treatments be given after the initial improvement.

Insulin-coma therapy has also been applied in a rather fixed fashion. It is a common practice, for instance, in the New York state hospitals to aim for production of 50 or 60 comas in each and every patient, thus

giving as many as 100 treatments. Yet in 1938 Malzberg surveyed 1,039 cases treated in those same hospitals, and found (1) that the rate of improvement was highest in those receiving 20 to 29 injections, and progressively lower for those getting more treatment, and (2) that the rate of remission decreased as the number of induced comas increased. This was confirmed in our own survey(2). It would seem that the rigid application of a fixed number of treatments for *all* patients, regardless of their basic nature and reaction to treatment, leaves no room for the clinical acumen and judgment which are the essence of good psychiatric practice. Such a policy subjects innumerable patients to unneeded days of treatment and unnecessary risks. In this indiscriminate use of shock therapy lies a danger, rather than a boon, to psychiatry.

Our experience with electroshock in the treatment of chronically disturbed schizophrenics is not encouraging. More care seems to be required for the patients after treatment than before. The practice in some hospitals of giving disturbed patients one treatment a week over long periods in order to keep them manageable seems unwarranted and fraught with danger. The ill-effects we have noted have been similarly described by Nussbaum(9), and have led to an essentially conservative approach, so well advocated by Rosen and his co-workers(10).

In cases of short duration, too, we have gained the definite clinical impression—confirmed by others of our hospital staff—that some patients who fail to get well are done irreparable injury. They seem to make down-grade progress more rapidly than is usual with untreated cases. When such effects are observed it becomes more desirable than ever that we discover newer and better criteria for the shock treatment of schizophrenics. The urgent need at present is not so much for *newer* modes of treatment, but for an *improved choice* of patients with our present methods, so that failures and deleterious effects can be more generally avoided. With a better ability to choose our patients for treatment the discovery of newer techniques will automatically lead to better results.

Shock therapy has been, and continues to be applied on a purely empirical basis. There is no known rationale for its use. The etiology of the diseases we treat is obscure, and the causal connection between the effects we produce and the results we obtain is hardly clear. Under such conditions humility would seem to be in order, caution a virtue, objectivity a worthy goal, and further investigation an urgent necessity.

BIBLIOGRAPHY

1. Gold, L., and Chiarello, C. The prognostic value of clinical findings in cases treated with electric shock. J. Nerv. and Ment. Dis., **100**: 577, Dec. 1944.

2. Gralnick, A. A seven year survey of insulin treatment in schizophrenia. Am. J. Psychiat., **101**: 449, Jan. 1945.

3. Gralnick, A. Fatalities associated with electric shock treatment of psychoses: report of 2 cases. Arch. Neurol. and Psychiat., **51**: 397, April 1944.

4. Gralnick, A. A fatality incident to electroshock treatment. J. Nerv. and Ment. Dis. (To be published.)

5. Gralnick, A. Psychotherapeutic and interpersonal aspects of insulin treatment. Psychiat. Quart., **18**: 179, Apr. 1944.

6. Impastato, D. J., Frosch, J., Almansi, R., and Wortis, S. The electrofit in depression—Comparison of hospital and privately treated patients. N. Y. S. J. Med., **45**: 179, Jan. 15, 1945.

7. Kalinowsky, L. B. Electric convulsive therapy, with emphasis on importance of adequate treatment. Arch. Neurol. and Psychiat., **50**: 652, Dec. 1943.

8. Myerson, A. Further experience with Electric-shock therapy in mental disease. New Eng. J. Med., **227**: 403, Sept. 10, 1942.

9. Nussbaum, K. Observations on electric shock treatment. Psychiat. Quart., **17**: 327, Apr. 1943.

10. Rosen, S., Secunda, L., and Finley, K. The conservative approach to the use of shock therapy in mental illness. Psychiat. Quart., **17**: 617, October 1943.

11. Weil, A., and Moriarty, J. Insulin therapy in schizophrenic patients responding unsatisfactorily to electroshock treatment. Dis. Nerv. Syst., **5**: 334, Nov. 1944.

COMPLICATIONS IN ELECTRIC SHOCK THERAPY[1]

LOUIS LOWINGER, B.S.S.

AND

JAMES H. HUDDLESON, Lt. Col., M.C., A.U.S.

Neuropsychiatric Research Unit, Veterans Facility, Northport, L. I., N. Y.

The complications arising in the course of electro-convulsive therapy fall into three general categories: (i) those due to the action of current on brain tissues; (ii) those referable to the neuronal discharge occasioned by the current, and (iii) those appearing in the skeletal and cardiorespiratory systems as by-products of the convulsion.

Complications Due to the Action of Current on Brain Tissue

The nature and duration of a current, and the resistance of the tissues traversed, are of first importance to the effect produced. The impedance offered by the head to the passage of an alternating current is a function of many variables: the nature, form and application of the electrodes, the frequency of the current, and the relative impedance of the integument and of deeper structures.

Between electrodes applied bi-temporally the lines of force representing the current density probably follow a fusiform pattern (Jaffe(1); Sulzbach, Tillotson, Guillemin and Sutherland(2); Alexander and Lowenbach(3)). The exact configuration of this spindle is a function of the current frequency, wave form, and intensity at the points of electrode contact.

After an electric shock just strong enough to produce convulsion in the cat, Moore(4) found no hemorrhages such as appeared (in the current path, not scattered through the brain) following his application of stronger currents. In the experiments of Morrison, Weeks and Cobb(5) on cats, rabbits and guinea pigs, alternating current produced constriction of pial vessels, slowing of blood flow, and shrinkage of the ganglion cells; edema, congestion and hemorrhages were found. Also in Langworthy's(6) rats, alternating current commonly produced central nervous system hemorrhages. These were attributed either to the marked venous congestion occurring with the shock, or to the sharp rise in blood pressure immediately following.

From numerous reports in the literature we quote three typical examples of animal experiments expressly designed to simulate the conditions that obtain in the electric shock therapy of human subjects. Lidbeck (7) administered 14 to 16 shocks to 3 dogs and found minimal effects: a single perivascular hemorrhage and capillary thrombi in 1 animal, shrinkage and ischemia of ganglion cells near the site of electrodes in the other 2. A series of 15 cats reported by Alpers and Hughes (8) sustained more damage: subarachnoid hemorrhage in 10, hemorrhage of the brain in 8 (7 punctate, 1 more extensive). Neubuerger, Whitehead, Rutledge and Ebaugh(9) shocked dogs at 3- to 5-day intervals, using 80 volts, 200 milliamperes, and a 0.15 second duration. They found paling, swelling, tigrolysis and vacuolation of the nerve cells, most pronounced in the cortex along the current pathway; glia and microglia revealed slight proliferation. In some brains the meninges, cortex and periventricular areas showed vascular dilatation and minute hemorrhages, but the commoner pathological changes were regarded as reversible.

In human subjects following electric shock therapy, histopathologic findings have been reported after necropsy in a few instances. Lesions similar to those cited above from the experimental work of Neubuerger and associates, were reported by Ebaugh, Barnacle and Neubuerger(10). Their cases were two 57-year-old patients: one died 1½ hours after the 12th grand mal; the other, immediately after the 1st grand mal which was produced

[1] Published with permission of the Medical Director, Veterans Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the authors.

by the 3d shock. The brains of these patients showed diffuse shrinkage and ischemic degeneration of cortical nerve cells, especially over the tops of the convolutions, with several small areas of destruction of blood vessels; there was proliferation of all glial elements, astrocytes being increased in the upper and deeper cortical layers. The changes were slightly more marked in the pathway of the current, but not limited thereto. The reporters stated that the lesions were not serious, that many were reversible, and that they were due to the electric shock therapy and its convulsive seizures.

In one of two necropsies reported by Alpers and Hughes(11) a 45-year-old patient, who died 2 months after receiving 62 shock treatments, had many punctate hemorrhages of various ages as well as foci of perivascular edema and necrosis in the cerebral cortex, cerebellum, basal ganglia and medulla. Also present were bronchopneumonia, marked fatty degeneration of the liver, cholecystitis and cholelithiasis. Their 2d patient was one with advanced arteriosclerosis who died at the age of 79, five months after the last of 6 electric shocks. In this instance there were found, chiefly in the white matter, scattered areas of old perivascular hemorrhage, gliosis, fibrosis and rarefaction. Again the cerebral findings were attributed directly to the effects of electroshock.

Complications Referable to the Neuronal Discharge; Electroencephalography

While a convulsion consequent to discharge of the pyramidal motor neurons is the predominant feature of the therapy, evidence abounds that other cellular structures may be excessively stimulated or impaired. Thus, Urquhart(12) offered evidence of possible effects of electroshock at the autonomic level. Currents passed between the nasal cavity and the atlanto-occipital ligament of rabbits stimulated the vagus center and consequently slowed the heart, unless the inhibitory fibers were controlled by atropin. Excitation of medullary centers was succeeded by their profound inhibition for a period following the breaking of the current.

It is not unreasonable (Jetter(13)) to assume that rarely the cardiac and vasomotor nervous control in man may be irritable enough to bring about sudden death after transcerebral stimulation by a relatively weak current, without any pre-existing cardiovascular disease.

An exceptional response of the vegetative system to cerebral shocking is postulated by Nussbaum(14) to explain the death of a 42-year-old schizophrenic after 60 electroshocks, many of which had given petit mal responses. Immediately following the course she was in fairly good condition, but lost weight rapidly to a point of severe emaciation, suffered from abscesses, and developed trophic changes of fingers and toes; death occurred 2 months after therapy ended.

A shock-induced seizure is exceptionally followed by status epilepticus. Mechanisms aroused by the current have failed to halt as usual, and shock therapy must be discontinued. The added response of a center not ordinarily reacting to shock currents could account for Gralnick's(15) case of post-shock status complicated by fatal hyperpyrexia.

A picture of manic delirium, which may terminate fatally, has been described by Bingel(16), and Kris(17), in certain cases of catatonic dementia præcox.

Cortical or subcortical organic effects may be correlated with the changes generally seen in the emotional response of depressed patients. Indirectly these changes may introduce a danger of the depressed becoming more prone to self-destruction. Some patients resist shocking and will elope.

Reversible or irreversible central nervous system changes must accompany the amnesia characteristic of the usual shock-induced organic syndrome (Kalinowsky(18)). Myerson(19) submits that amnesias may reflect swelling, or punctate hemorrhages. Most investigators (*e. g.*, Smith, Hastings and Hughes(20); Levy, Serota and Grinker (21)), report that memory impairments are restored in from a few weeks to 9 months. Their duration and severity vary with the number of electroshocks given.

The nearest approach to measuring changes in the brain is by electroencephalography. Pacella, Barrera and Kalinowsky (22) found that the intensity and duration of electroencephalographic abnormalities

were related directly to the number of electric shocks administered. Patients subjected to a series of from 7 to 12 convulsions showed records in which all abnormally slow waves disappeared after 1 to 3 months. In 70 percent of patients who had had 13 to 22 convulsions, the abnormally slow waves disappeared 2 to 6 months after termination of therapy; in the others, slow potentials still persisted at the end of 6 months. These authors commented that while the electroencephalographic abnormalities are largely reversible, this does not necessarily mean that any cellular changes are correspondingly reversible.

In this clinic the EEG signs of abnormality have developed generally between the 5th and 10th grand mal. They have been of the most varied nature, from a slight slowing and an increase in amplitude to a diffusely disorganized pattern with sharp and slow waves appearing at random under all leads. These disturbances have tended to disappear within a month after the last treatment.

Complications Due to the Convulsion: Skeletal; Cardiac, also with Curare; Pulmonary

Long bones are seldom fractured by the convulsion; compression fractures of vertebral bodies are common. Fracture rates for the humerus range from Taylor's(23) 0.26 percent in 1133 cases, to Evans'(24) 4.0 percent in 50 cases over the age of 50. Femur, acetabulum, scapula, ribs and vertebral processes are rarely fractured.

The greatest variation exists among reports of compression fractures of vertebral bodies. Taylor found 0.5 percent, X-raying only the few patients who complained of post-shock back pains. Horwitz(25) X-rayed every patient after his shock course and found a 20 percent rate.

In the first 252 electroshock cases at this Facility, any complaint of back pain was followed up by a spinal X-ray; 13 cases, or 5.2 percent, showed one or more vertebral-body compressions. Shocking was then discontinued. This practice may be unwise, since some patients with compressed fracture, which tends to occur early in a course of convulsive therapy, are evidently going through their treatments without complaints. "Silent" compressions will not appear in statistics unless every spine is X-rayed after a course. If compressions generally are as common as in Horwitz' 20 percent of all cases, then in this clinic and elsewhere there will be up to 15 percent of undetected asymptomatic compression fractures in addition to the 5 percent detected because of symptoms.

Worthing and Kalinowsky(26) followed up 8 cases, 2 years after severe compressions had been shown by X-ray, without finding anything of consequence by radiologic, orthopedic or neurologic examination. Neuropsychiatrists seem to agree that electroshock-induced spinal compression fractures have no clinical significance, offer no threat to the spinal cord, and do not interfere with heavy muscular effort.

Dislocations of the mandible were mentioned in the earlier reports. Better technique in holding the jaw seems practically to have eliminated this complication. A more troublesome though rarer accident has occasionally been seen in forward dislocation at the shoulder. Although some operators obviate this by applying strong manual pressure backward over the head of the humerus, this pressure may also increase the risk of humeral fracture.

The profound changes in the general circulation that accompany grand mal, together with the latter's violent muscular exertion, put a strain on the heart that can prove dangerous in the presence of any weakness, especially liability to coronary complications. Two cases of Jetter's(13) are illustrative. Advanced coronary arteriosclerosis was found in a patient 61 years old, who died a few minutes after his 8th convulsion. A 23-year-old man died several hours after the 8th convulsion of a second course, from rapidly progressing heart failure; he was found to have an acute myocarditis and acute glomerulonephritis. Delayed circulatory failure accounted for a death reported by Gralnick (15); this seemed due proximately to asphyxia in the presence of acute edema of the lungs, and brain, 2 days after the 2d convulsive treatment of a 35-year-old man.

At this hospital we observed several shock-treated patients with a mild or moderate arterial hypertension that tended, while varying, to show net increments from week to

week or from shock to shock. All these patients had exhibited a clinical picture, an electrocardiogram, and a heart X-ray (when this had been taken) close enough to "normal" to permit the undertaking of shock therapy. Several courses had to be stopped before their anticipated conclusion, because of alarming rises in systolic and diastolic pressure.

The question of whether cardiac damage was caused by the shocking was raised in only one of our hypertensives. This 48-year-old schizophrenic completed one course without accident, and with some benefit psychiatrically. Relapsing later, he was given a second course, also unmarked by complications. His pressure remained moderately elevated, 150/90 to 160/100 (after the final shock it had risen momentarily from a pre-shock of 160/100 to a post-shock reading of 220/130). He died of coronary occlusion 4 months later. No one ascribed this death to shock therapy, but some remote causal connection is not beyond possibility.

Curare has been used to mitigate the severity of convulsions, particularly in the poorer cardiac risks. While it does remove the load imposed on the heart by violent muscular activity, in some other manner it may raise the chances of heart failure. In a detailed study of blood pressure, pulse and respiratory phenomena accompanying curare-protected convulsive shock, Woolley (27) noted great variability in circulatory and respiratory reactions, sometimes of extreme degree during and subsequent to the seizure. Sharp fluctuations occur also without curare; but the observation that severe drops in blood pressure, pulse and respiration were promptly controlled by the administration of prostigmin or adrenalin suggested that curare played an important rôle in producing them.

Deaths have resulted from the use of curare. Cash and Hoekstra(28) reported one in a 47-year-old man 2 hours after the 5th curare-modified grand mal, with the subsequent finding of marked coronary sclerosis but no myocardial involvement. Ziskind and Ziskind(29) reported that of a 50-year-old patient with a history of hypotension, pulse irregularity and cyanosis, who died one day after the 2d electric shock with curare. It is not yet clear whether curare adds more hazards than it subtracts.

Pulmonary vulnerability is an established fact in electric shock therapeutics. Inactive tuberculosis has been activated (Hemphill (30) and others). Pneumonia and lung abscess, both in part probably consequent to accidents of aspiration, seem to occur oftener than expected. Evans reported an instance of pneumonia beginning 2 days after a shock treatment and ending fatally 36 hours later, although he did not charge this complication to the therapy. In an unreported case, symptoms of broncho-pneumonia began 10 or 12 days after, and ended fatally 2½ weeks after a shock course; similarly this death was not ascribed to the therapy. In one of our cases, symptoms diagnosed as those of pulmonary abscess appeared a month after the course was ended. This clear interval seemed too long to allow connecting the abscess with the treatment, although it could have been construed as a complication.

Reluctance to connect pulmonary or other accidents with the therapeutic program has probably contributed to its low mortality rate. Jetter(13) noted 1.2 deaths per thousand in 2500 cases; the comprehensive report of Kolb and Vogel(31), only 0.5 per thousand in 7200.

Summary

Therapeutic electric shocks produce some reversible cortical changes, probably together with some irreversible neuronal degeneration and gliosis. The typical memory losses are generally recoverable, and the diversified EEG disturbances tend to disappear in several months.

According to reports in the literature, the neuronal discharge may have other effects than the intended grand mal: cardiac arrest, autonomic disorders, status epilepticus, or manic delirium.

Regardless of operating technique, reported rate of compression fracture of a vertebral body vary from 0.5 percent of cases, to 20 percent with routine X-raying. Many compressions will remain undiscovered unless spines are routinely X-rayed post-shock. Compression spinal fractures are clinically inconsequential. The humerus, or more rarely some other bony structure, is occasionally fractured; to these instances the technique of shocking seems relevant.

Dislocation at the shoulder or mandibular joint should be technically preventable.

Arterial hypertension may be aggravated by electroshock, and myocardial insufficiencies can lead to a fatal outcome. Curare attenuates the convulsive violence but may add new dangers; its drawbacks are still under scrutiny.

Aspiration during the coma has been deemed responsible for complicating lung abscesses. Liability to pulmonary complications probably has other unknown causes. Post-shock pneumonias have not always been charged to the therapy. The published mortality rates appear over-optimistic.

BIBLIOGRAPHY

1. Jaffe, R. R. Electropathology. Arch. Path., **5**: 837, May 1928.

2. Sulzbach, W., Tillotson, K. J., Guillemin, V., and Sutherland, G. F. A consideration of some experiences with electric shock treatment in mental diseases, with special regard to various psychosomatic phenomena and to certain electrotechnical factors. Am. J. Psychiat., **99**: 519, Jan. 1943.

3. Alexander, L., and Lowenbach, H. Experimental studies on electroshock treatment: The intracerebral vascular reaction as an indicator of the path of the current and the threshold of early changes within the brain tissue. J. Neuropath. and Exper. Neurol., **3**: 139, April 1944.

4. Moore, M. T. Discussion of Alexander, L., and Lowenbach, H. (*vide supra*). Arch. Neurol. and Psychiat., **49**: 618, April 1943.

5. Morrison, L. R., Weeks, A., and Cobb, S. Histopathology of different types of electric shock on mammalian brains. J. Indust. Hyg., **12**: 324-337, 364-380, Nov. 1930.

6. Langworthy, O. R. Abnormalities produced in the central nervous system by electrical injuries. J. Exper. Med., **51**: 943, June 1930.

7. Lidbeck, W. L. Pathologic changes in the brain after electric shock. J. Neuropath. and Exper. Neurol., **3**: 81, Jan. 1944.

8. Alpers, B. J., and Hughes, J. Changes in the brain after electrically induced convulsions in cats. Arch. Neurol. and Psychiat., **47**: 385, Mar. 1942.

9. Neubuerger, K. T., Whitehead, R. W., Rutledge, E. K., and Ebaugh, F. G. Pathologic changes in the brains of dogs given repeated electrical shocks. Am. J. M. Sc., **204**: 381, Sept. 1942.

10. Ebaugh, F. G., Barnacle, C. H., and Neubuerger, K. T. Fatalities following electric convulsive therapy. Arch. Neurol. and Psychiat., **49**: 107, Jan. 1943.

11. Alpers, B. J., and Hughes, J. The brain changes in electrically induced convulsions in the human. J. Neuropath. and Exper. Neurol., **1**: 173, April 1942.

12. Urquhart, R. W. Experimental electric shock. J. Indust. Hyg., **9**: 140, April 1927.

13. Jetter, W. W. Fatal circulatory failure caused by electric shock therapy. Arch. Neurol. and Psychiat., **51**: 557, June 1944.

14. Nussbaum, K. Observations on electric shock treatment. Psychiat. Quart., **17**: 327, April 1943.

15. Gralnick, A. Fatalities associated with electric shock treatment of psychoses. Arch. Neurol. and Psychiat., **51**: 397, April 1944.

16. Bingel, A. Über die psychischen und chirurgischen Komplikationen des Elektrokrampfes. Allg. Ztschr. f. Psychiat., **115**: 325-343, 1940.

17. Kris, Elsie. The convulsive therapies. Read at thirty-fifth annual meeting of the American Psychopathological Association, New York, April 26, 1945.

18. Kalinowsky, Lothar B. Organic psychotic syndromes occurring during electric convulsive therapy. Arch. Neurol. and Psychiat., **53**: 269-273, April 1945.

19. Myerson, A. Further experience with electric shock therapy in mental disease. New Eng. J. Med., **227**: 403, Sept. 1942.

20. Smith, L. H., Hastings, D. W., and Hughes, J. Immediate and follow up results of electric shock therapy. Am. J. Psychiat., **100**: 351, Nov. 1943.

21. Levy, N. A., Serota, H. M., and Grinker, R. R. Disturbances of brain function following convulsive shock therapy. Arch. Neurol. and Psychiat., **47**: 1009, June 1942.

22. Pacella, B. L., Barrera, S. E., and Kalinowsky, L. B. Variations in electroencephalogram associated with electric shock therapy of patients with mental disorders. Arch. Neurol. and Psychiat., **47**: 367, Mar. 1942.

23. Taylor, H. J., Jr. Symposium: Complications of and contraindications to convulsive shock therapy. Arch. Neurol. and Psychiat., **49**: 789, May 1943.

24. Evans, V. L. Convulsive shock therapy in elderly patients—risks and results. Am. J. Psychiat., **99**: 531, Jan. 1943.

25. Horwitz, W. A. Cited by Pacella, B. L. Sequelae and complications of convulsive shock therapy. Bull. New York Acad. Med., **20**: 575-587, Nov. 1944.

26. Worthing, H. J., and Kalinowsky, L. B. The question of vertebral fractures in convulsive therapy and epilepsy. Am. J. Psychiat., **98**: 533, Jan. 1942.

27. Woolley, L. F. Immediate circulatory and respiratory effects of convulsive shock. J. Nerv. and Ment. Dis., **100**: 1-23, July 1944.

28. Cash, P. T., and Hoekstra, C. S. Preliminary curarization in electric convulsion therapy. Psychiat. Quart., **17**: 20, Jan. 1943.

29. Ziskind, E. S., and Ziskind, E. Prevention of sub-convulsive reactions in convulsive therapy for psychoses. J. Nerv. and Ment. Dis., **99**: 889, June 1944.

30. Hemphill, E. R. Electric convulsion therapy. Lancet, **243**: 152, Aug. 1942.

31. Kolb, L., and Vogel, V. H. The use of shock therapy in 305 mental hospitals. Am. J. Psychiat., **99**: 90, July 1942.

DISAPPEARANCE OF PAINFUL PHANTOM LIMBS AFTER ELECTRIC SHOCK TREATMENT[1]

J. E. PISETSKY, CAPTAIN, M.C., A.U.S.
Veterans Administration Facility, Roseburg, Oregon

The treatment of the phantom limb syndrome has generally represented a problem of major proportions. Most forms of therapy have had little effect on the abolition of the painful concomitants of the phantom limb. Both medical and surgical procedures, such as repair of the stump, removal of a neuroma, spinal anesthesia, rhizotomy, chordotomy, sympathectomy, injection of alcohol or of a solution of procaine hydrochloride either into the nerves or into the neuroma or into the thoracic sympathetic ganglion, x-ray therapy of the spinal cord or spinal nerve roots, and physical therapy to the stump, have proven to be of variable and unpredictable value. White(1) recently concluded that some of these procedures may be decidedly harmful. He also cites the fact that Van Wagenen recently treated a patient who had endured forty-five operations for chronic osteomyelitis and had finally lost a leg through amputation; the severe phantom limb pain which was present yielded to bilateral frontal lobotomy. The success of de Gutierrez-Mahoney(2) in the treatment of a painful phantom limb through resection of the postcentral cortex is also noteworthy. This author noted that a patient with a painful phantom limb experienced a remission in his symptoms after a convulsive seizure. This interesting clinical finding served as the basis for our present research. The use of electric shock therapy suggested itself as a method for the controlled administration of a convulsive seizure to produce the effect, more protracted if possible, which de Gutierrez-Mahoney had observed.

CASE REPORT(3)

Patient is a 55-year-old white male who was employed as a brakeman and fell from a moving train in 1939. Both legs were badly mangled and infection set in so that repeated painful operations had to be performed, which eventuated in the amputation of both legs below the knees. A psychosis of the involutional melancholia type was precipitated by this accident. He was depressed, harbored ideas of self-destruction, and was agitated, irritable and emotionally unstable. He continually complained of pain in both feet of the missing legs. Although the amputations had been at a level below the knees, he felt as though the toes and heels itched and the soles of the feet burned; occasionally the feet felt hot and cold, as they did in years gone by when, as a brakeman, he had been exposed to the cold and had often frozen both feet. These pains constantly recurred and caused him much discomfort and pain, so that he thrashed about in bed, cursed and expressed a wish to die.

Occasionally, while lying in bed, he had choreatic jerkings of both legs, which he could not control. The stumps were generally painful, but he could walk about on them during an attack-free period. Neuromata were never palpated. He refused to wear artificial limbs, because he claimed they would hurt him too much. His prepsychotic history indicated that for years he was nervous and maladjusted.

On July 11, 1944, electric shock treatment was instituted but he had his first good grand mal seizure on July 15, 1944, during his second treatment. On August 7, 1944, when he was questioned, the sensation of the phantom limb was still present. However, on August 9, 1944, a marked change in his personality was noted and for the first time in years the patient smiled, he was euphoric and asked for his artificial limbs. He now admitted that the phantom limb had disappeared but he had not been conscious and aware of its disappearance. At that time he had experienced seven good grand mal seizures. Patient now presented a fairly marked hypomanic reaction and exhibited an unusual exuberance and an elevation of mood. His self-recriminations, agitation and suicidal ruminations all had disappeared, and he became less sensitive to noises; whereas previously he had cursed loudly when he heard music or the news over the radio, he actively went over to the radio to listen to it. He also displayed an interest in the other patients and for the first time in five years he wrote a letter home. Of the phantom limb, there remained only a painless "drawing," particularly located in both popliteal spaces, which responded partly to whirlpool baths. There was no evidence of the choreatic jerkings which had been a prominent aspect of the previous syndrome. The itching and burning sensations had also subsided. Now a year after the institution of treatment, he has

[1] Published with the permission of the Medical Director, Veterans' Administration, who assumes no responsibility for the opinions expressed or conclusions drawn by the author.

been able to wear artificial limbs, which he previously rejected vehemently because of the unbearable pain, but now he hardly has any complaints.

Discussion

It is a matter of common knowledge that electric shock therapy is beneficial in the treatment of the affective psychoses, particularly of involutional melancholia. Kalinowsky(4) and others have noted high rates of improvement, up to 86% of their cases. The improvement in the emotional response in our patient was not as remarkable as the disappearance of the painful phantom limb. This phenomenon has hardly been reported previously. It is not obvious how the few convulsions produced a cessation of pain, but the opinion has recently been expressed that a "convulsion extinguishes all functions which find expression as personality, and in the immediate postconvulsive state the vegetative processes only continue." A memory defect of varying intensity and varying duration lasting from hours to months frequently follows, associated with a mitigation of the psychotic symptoms, but it can hardly be surmised that the disappearance of the phantom limb could necessarily be explained on a mnemonic basis. It may be true that a good deal of time may elapse after a convulsion before the reintegration of neurological and psychological functions, including the reestablishing of cognitive, expressive and associative abilities. The concept, not entirely proven, that electric shock treatment produces cortical damage cannot be entirely accepted in view of the fact that disturbed paretics with definite organic cerebral pathology have manifested improvement after electric shock treatment. Selinski(5) relates improvement in electric shock therapy to changes in the oxygen-carbon dioxide ratio, changes in the vascularity of various brain areas, changes in blood pressure, velocity of blood flow, changes in the chemical contents of the blood and changes in the cellular structure of the cerebral cortex as manifested by the changes in the electroencephalogram. This author also believes that electric shock jars the apathy or inertia which prevents the individual from facing reality. It is also his opinion that the "improvement is related to changes in feeling tone which includes mood, quality of perception, attitude toward self and attitude toward the world, and awareness of capacity to feel the ability to do things." It must be conceded that in all these respects our case manifested improvement.

Strictly speaking a definite cerebral localization for the phenomenon of the phantom limb has not been completely established. Many authors believe that peripheral factors outweigh the central in importance. Nevertheless, Head and Holmes(6), Riddoch(7) and Gerstmann(8) predicate that the phantom limb is related to the sensory function of the parietal cortex. Head and Holmes observed the disappearance of a post-amputation phantom foot following a lesion of the opposite parietal cortex. In this connection, the neurosurgical innovation of Mahoney(2) is worthy of more detailed mention. This was based particularly on the study of a case of a man who had injured several fingers of the right hand and an extremely painful phantom limb appeared. The patient also suffered a partial paralysis on the right side, but there was no change in the phantom limb. He later experienced a few convulsions and in the post-convulsive period the phantom limb pain disappeared for a day but it returned. After a subpial resection of the contralateral postcentral cortex corresponding to the missing appendages, the phantom limb and the pain disappeared completely. This work seemingly confirms the original observation of Head and points to a cortical projection for the phantom limb manifestations. The time is not yet at hand for conclusions to be drawn on the effects of electric shock on the function of the postcentral sensory cortex or the parietal lobe.

There are some who believe that psychosurgery as represented by frontal lobotomy and electric shock therapy produce "blanching of the emotional coloring connected with obsessive ideas, relief of tension and certain unpleasant organic side effects, such as unrestrained behavior and impaired judgment." If this be accepted as a *modus operandi* for these two forms of treatment then their application to the elimination of the painful phantom limb is a logical one.

Randall, Ewalt and Blair(9), who recently studied the psychiatric reaction to amputations suffered by 100 men in the service conclude that the "individual's total reaction

to injury and his adjustment to it are of greater importance to his future usefulness and comfort than any sensations that seem to come from his missing member." These authors are to be commended for this attitude, but they also indicate that there was a high incidence of psychopathologic conditions in their group, and although 95% had phantom limb sensations only one was painful. It must be borne in mind that they studied early reactions to the loss of a limb before the individuals had attempted an economic or social adjustment. These facts are significant because those who have sought treatment have been considered neurotics, many of whom reputedly belong to the obsessive type. With the presence of numerous psychopathologic determinants in the early stages of their readjustment, it may be predicted that depressive and other trends would appear together with a more disturbing form of the painful phantom limb. Particularly in those cases where the psychotic level would be reached, the application of electric shock therapy might be indicated.

At times it has appeared that the "burning and itching" experienced by our patient was actually causalgic in type and that a painful phantom limb actually was a phantom limb with a superimposed causalgic component. Special attention was not paid to the temperature and skin characteristics of the patient's stumps. He was able to use them to get about in his relatively rare symptom free moments and the stumps were "callused." Inasmuch as de Takats(10) recognizes a peripheral and a cortical sensory level for the causalgic state, then in the treatment, the cortical level must also be considered. In this regard it is interesting to note that after the completion of the electric shock treatment the patient no longer noted the "burning and itching" or the causalgic element; the "drawing" which remained might be accepted as a causalgic residual.

Of practical importance is the fact that after a period of more than five years during which the thought of artificial limbs would make the patient yell with fear and would recall painful memories of the discomfort endured when soon after his stumps finally healed he had attempted to use artificial legs and had rejected them vehemently because of the painful phantom limbs, he was now able to walk about with comfort. The uplift to his morale was considerable when he finally did use his "limbs." His improvement has continued now for over a year and although his hypomanic reaction has levelled off a little, he is still very enthusiastic.

Specifically this form of treatment would be recommended in selected cases, only where markedly depressive trends and suicidal tendencies would accompany an especially painful phantom limb, and where other forms of treatment had proven ineffectual. Furthermore, all the physical prerequisites for electric shock treatment would have to be met.

Summary

A 55-year-old male with an involutional psychosis precipitated by the traumatic loss of both legs with very painful phantom limbs was treated with electric shock. An improvement in the psychosis and a disappearance of the painful phantom limbs resulted. The mechanisms involved were discussed and relations to the causalgic state intimated.

BIBLIOGRAPHY

1. White, J. C. Pain after amputation and its treatment. J. A. M. A., **124**: 1030, April 8, 1944.

2. de Gutierrez-Mahoney, C. G. Treatment of painful phantom limb by removal of postcentral cortex. J. Neurosurg., **1**: 156, March 1944.

3. Pisetsky, J. E. The phenomenon of the phantom limb. Med. Bull. Vet. Admin., **20**: 320, January 1944.

4. Kalinowsky, Lothar B. Experience with electric convulsive therapy in various types of psychiatric patients. Bull. N. Y. Acad. Med., **20**: 485, September 1944.

5. Selinski, Herman. The selective use of electroshock therapy as an adjuvant to psychiatry. Bull. N. Y. Acad. Med., **19**: 245, April 1943.

6. Head, H. and Holmes, G. Sensory disturbances from cerebral lesions. Brain, **34**: 102, 1911-12.

7. Riddoch, G. Phantom limbs and body shape. Brain, **64**: 197, 1941.

8. Gerstmann, J. Problem of imperception of disease and of impaired body territories with organic lesions. Arch. Neurol. and Psychiat., **48**: 910, 1942.

9. Randall, G. C., J. R. Ewalt and H. Blair. Psychiatric reaction to amputation. J. A. M. A., **128**: 645, June 30, 1945.

10. de Takats, G. Causalgic states. J. A. M. A., **128**: 699, July 7, 1945.

EXPERIENCES WITH THE PHARMACOLOGIC SHOCK THERAPIES IN THE "PSYCHOSES" IN MILITARY PERSONNEL

WALTER GOLDFARB, MAJOR, M.C., JAMES F. DORSEY, CAPTAIN, M.C.,
J. M. LAUGHLIN, CAPTAIN, M.C., A.U.S.,
AND
HUGH E. KIENE, MAJOR, M.C.

The use of shock treatments for psychoses in the European theater of operations was first authorized in 1943. The present report deals with our experiences with cases treated with either electroshock or insulin shock. We are making no attempt to review the vast literature which has been done elsewhere (Tennent 1944; Cook 1944).

Case Material.—The case material consisted of patients received before the beginning of active combat in France. Few of the original group had seen combat in Africa or Sicily, and as a group they were considered as garrison soldiers. The cases were chosen for treatment without regard for the duration of military service, but rather with a view to obtaining improvement in their mental condition. The authors are conscious of the fact that the diagnoses in these patients were principally based on their presenting picture when seen at this hospital, and that they sometimes differed from the schizophrenic patients seen in civil practice. The following case histories are presented to exemplify these variations:

CASE 1.—The soldier was a 23-year-old white male with 2 years of military service. He was first admitted to a hospital with complaints of epigastric distress, fatigue and fears about the state of his health. He had been discharged from another hospital a few days before, but there was no record of his diagnosis at that hospital. A complete medical workup revealed no organic basis for his complaints. The patient continued to complain and, although he was treated with psychotherapy and hypnosis, did not improve. Eight days after admission, he made some superficial cuts on his wrist with a razor and was transferred to this installation. On admission here, he was fearful of dying, thought that other patients were talking about him, and that they could control his mind. He stated that he was doing more harm than good in the world and wanted to kill himself. There were numerous somatic delusions, including the feeling that his skin "smelled dead," and that when he thought of the devil he felt a flush of heat over the skin. His insight and judgment were poor, and he was classified as a dementia præcox, paranoid type.

Case 1 exemplifies two common characteristics of this group. The initial history received from other hospitals was that of an anxiety neurosis which rapidly progressed to a psychotic-like picture, in this case, over an 8-day period. In many instances there was a history of a prepsychotic personality of the schizoid type, but there was an appreciable number who did not have such personalities. During the phase of psychotic-like behaviour, the somatic complaints which initiated the episode disappeared. A small number demonstrated a similar onset which arose while the patient was in combat in Africa or Sicily. In case 2, the neurotic episode was classified as a traumatic neurosis:

CASE 2.—The patient was a 30-year-old white male serving in the paratroopers. He was in combat in Africa and Sicily, and first complained of various somatic complaints on December 6, 1943. He felt jumpy, his ears rang when he ate, he had frontal headaches, a crushing feeling in his chest, abdominal distress and constipation. He was in action soon after and was knocked out by a nearby explosion. He was then seen in a battalion dispensary where he had the same complaints and was diagnosed as a traumatic neurosis. On December 18 he was transferred to a general hospital where he was confused, and complained that charges of electricity were placed in his body. He also felt that he was a prisoner, that other patients talked about him, that an officer was a German in disguise, and that his cigarettes were drugged. He was evacuated to England through several hospitals, and when he was seen in this hospital in February, he was severely blocked, expressed the same paranoid ideas and bizarre somatic delusions. He had no gastrointestinal complaints or head pains.

This patient demonstrated the common finding that, unlike the neurotic picture, the psychotic-like picture usually remained fixed when it appeared. In the cases which responded to therapy with a disappearance of the psychotic symptoms, there was no recurrence of the neurotic complaints. Miller (1940) described a similar experience in civil practice. In his cases there was an initial

appearance of a neurotic pattern followed by the psychotic symptoms. When the latter disappeared during psychoanalytic therapy, the neurosis did not recur. A large number of our patients showed a considerable disturbance of their affect associated with undoubted schizophrenic symptoms. Case 3 is typical of this group.

CASE 3.—The patient was admitted to the hospital on December 22 with a diagnosis of chronic urethritis. He was treated medically and first began to show mental symptoms on January 18. He was found lying in bed, extremely restless and jerking his body spasmodically and aimlessly. He was confused, incoherent, irrational and had sudden outbursts of violent activity. He kept repeating, "Repeat three words after me, I love you," and "put a thermometer in my mouth. That will tell you how I am." He was transferred to this hospital and, on admission, was found to stutter markedly, was easily excited, and thought that other men were taking advantage of him. A few days later, he was found grimacing, smiling and constantly talking in either a stage whisper or a shout. At one time he took off his clothes and began to dance about and then suddenly began to curse and laugh. He failed to answer direct questions correctly, and could not concentrate on the simplest problems. He did not recognize this installation as a hospital, or the examiner as a medical officer. He was amenable to suggestion most of the time, but had episodes of violent homicidal behaviour.

In this patient the onset of his maniacal behaviour was sudden and he failed to improve with routine care. The disorder of his affect was the principal symptom, but the ideational content expressed was entirely bizarre and dissociated from reality. Bleuler (1923) and Cobb (1941) have described cases with similar mixtures of schizoid and affective symptoms in civil life, and we have observed a fairly high percentage of these mixed cases. Ordinarily, we have classified them as dementia præcox unless there was some history of prepsychotic cyclothymic behaviour and other symptoms of an affective disorder.

In summary, the following differences have been noted between the patients seen in civil practice and some of those found in the military personnel. (1) The schizophrenic picture was often preceded by an initial neurotic behaviour pattern precipitated by some situational change such as combat, leaving the U.S., etc. (2) The full-blown appearance of the dementia præcox came on in a relatively short time, usually a matter of a few weeks. There were very few cases which gave a history of a slow, insidious onset of symptoms over a period of years. (3) Many cases not included in this report showed a sudden complete remission from symptoms which might occur practically overnight after the symptoms had been present for weeks or months. (4) There were many cases with a proven duration of only a few weeks who presented symptoms which are ordinarily regarded as indicating deterioration. They were extremely untidy, urinated and defecated in their clothes, and almost resembled a complete amentia in the depth of their regression. These so-called deterioration signs had no significance for the prognosis with treatment. (5) The clinical material in this group often had a disorder of affect associated with the schizoid symptoms. They were usually classified as dementia præcox, and the diagnosis of manic-depressive psychosis was reserved for those cases which gave a good history of previous cyclothymic behaviour and other affective symptoms.

The age distribution ranged from 18 to 40. The patients were uniformly in good physical health, and even minor defects of the heart, lungs, skull or spinal column were sufficient to exclude a patient from treatment. The large bulk of the cases were in service from 1 to 2 years, and the range was from less than 1 year up to 16 years. Approximately 95% of the cases were enlisted men, and the remainder officer personnel. There was no significant difference between their military rank and that of 300 consecutive neurotics passing through the hospital.

Indications for Treatment.—The choice of electroshock (ECT) or insulin depended on a number of factors. ECT was recommended in the following groups: (1) manic-depressive psychosis with prominent affect disorders; (2) schizophrenics with large component of affect disorder; (3) many patients diagnosed as dementia præcox were treated with ECT because of a lack of sufficient personnel to give insulin shock treatment; and (4) the acutely disturbed dementia præcox patients were often treated with 2 to 4 electric shocks which lessened the disturbed behaviour and made them more amenable to insulin shock treatment which was

then instituted. Insulin shock as a rule was recommended for dementia præcox. If time permitted, those who were complete failures with insulin were treated with ECT, and vice-versa. Frequently improvement would be obtained.

The usual case required either 10 ECT shocks or 20 insulin comas to produce a remission. We have felt that therapy should be continued as long as the patient showed improvement, and we have given either 2 ECT shocks or 5 insulin comas, after they had reached their maximum improvement. If there was no remission with 10 ECT shocks or 20 insulin comas, treatment was usually terminated. A number of cases were incompletely treated because they were prematurely evacuated to the United States. These cases are not included in this report.

Technique.—The electroshock was induced with an Ediswan machine which was regulated to deliver 250 milliamperes, at voltage ranging from 60 to 150, and the time ranged up to 1 second. The usual dosage was between 100 and 140 volts, and the time varied from 0.1 to 0.3 second. The technique of holding the patient to prevent fracture of the vertebra was manual restraint in which the patient was placed on a flat table with a small sandbag under the dorsolumbar junction, and manual pressure was exerted on the pelvic and shoulder girdles to maintain the opisthotonus. X-ray examination of two series of 81 and 61 consecutive cases after treatment failed to show any evidence of spinal fracture. A small amount of curare was made available to us through the kindness of Squibb and Company. The curare was administered according to the technique of Bennet (1940). It was used as a premedication in three cases in which it was essential to "soften" the seizure. These were psychotics in which the following complications existed: (1) chronic dislocation of the jaw; (2) recent fracture of the wrist; and (3) recently sutured wrist tendons due to a suicidal attempt. In each of these cases, the treatment with ECT was successfully completed without incident.

It is generally agreed that the efficacy of the insulin shock therapy is dependent on the number of comas and the duration of the coma. In the present group, the factor of time was important because of the necessity to evacuate them to the Zone of the Interior. The technique used therefore was that described by one of us (Goldfarb, 1943), in which the insulin was administered in divided doses. Insulin was administered intramuscularly in half of the cases, and intravenously in the remainder. The average time required to produce the first coma was 6 days with the intramuscular route and 4 days with the intravenous.

The blood sugar curves of 2 patients treated with the intravenous insulin are presented in Fig. 1. The dosages were increased daily (Goldfarb, 1943), the first dose being 60 units in 5 portions, followed by an increase of 50 units daily. The onset of coma is indicated by the arrow. It may be seen that the patients uniformly reached the hypoglycemic level on the first day of treatment but that there was a spontaneous rise of the blood sugar after about 2 hours of hypoglycemia. From the curves it is apparent that coma supervened after the blood sugar had been maintained at low levels for more than 2 hours.

In half of the cases treated with insulin, each coma was terminated with 600 cc. of 25% glucose per os. The patients were routinely given 5 mg. of thiamine daily to obviate the onset of vitamin B deficiency symptoms (Goldfarb-Bowman, 1941). In the latter half of the cases, when ample quantities of intravenous glucose became available, the coma was terminated with 40 cc. of 50% glucose intravenously, followed by a feeding of grain cereal by mouth. Despite the frequent intravenous punctures for the administration of insulin and particularly the glucose solutions, we have had no cases of sclerosed veins. We believe the following technique of venapuncture accounted for the fact that this complication was not encountered. The veins in the anticubital fossa were punctured while the arm was at the same level as the heart, and after the termination of the injection, the arm was immediately elevated to the erect position. It was found that in cases who did not strain and struggle, the puncture wound healed without requiring pressure over the wound. The lumen of the vein remained widely patent and the concentration of glucose at the site of the puncture was not high enough to set up a local phlebitis. The physiological principle of cir-

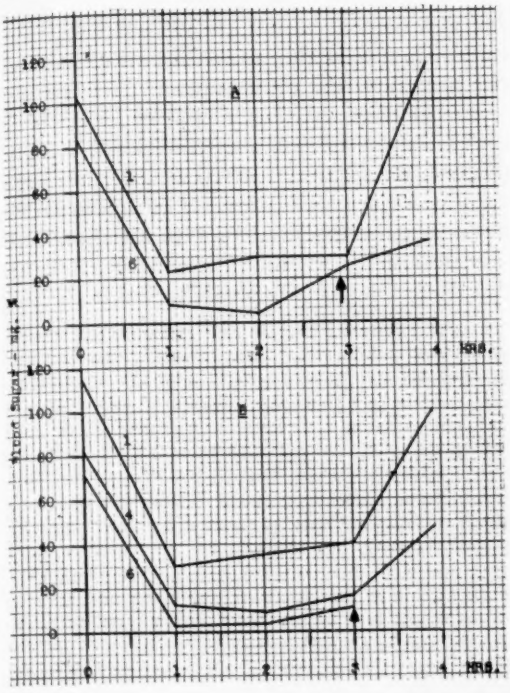

FIG. 1.—Blood sugar curves following insulin intravenously. Dosage: Patient A; Curve 1—60 units; curve 6—310 units; Patient B; curve 1—60 units; curve 4—210 units; curve 6—310 units.

culation which permitted this technique is shown in Fig. 2. When the arm was at the level of the heart, the venous pressure approximated 10 cm. of water higher than atmospheric pressure. Elevation of the arm brought the site of the puncture wound about 30 cm. higher than the heart, and the venous pressure fell to approximately 20 cm. of water below the atmosphere. There was no perivascular leakage of blood and the wound healed without requiring stagnation of the venous blood with its high local concentration of glucose.

Results and Complications.—The classification of the results of therapy presented many problems because there was no opportunity for a follow-up after the patient left this installation. With this limitation in mind, we have classified the results in the following categories: (1) a patient was considered to have made a complete remission if all the signs and symptoms of the psychosis had disappeared and he had achieved a good insight into the character of his illness; (2) if the patient improved either in his symptomatology, general behaviour on the ward, or gained some insight into his illness, but

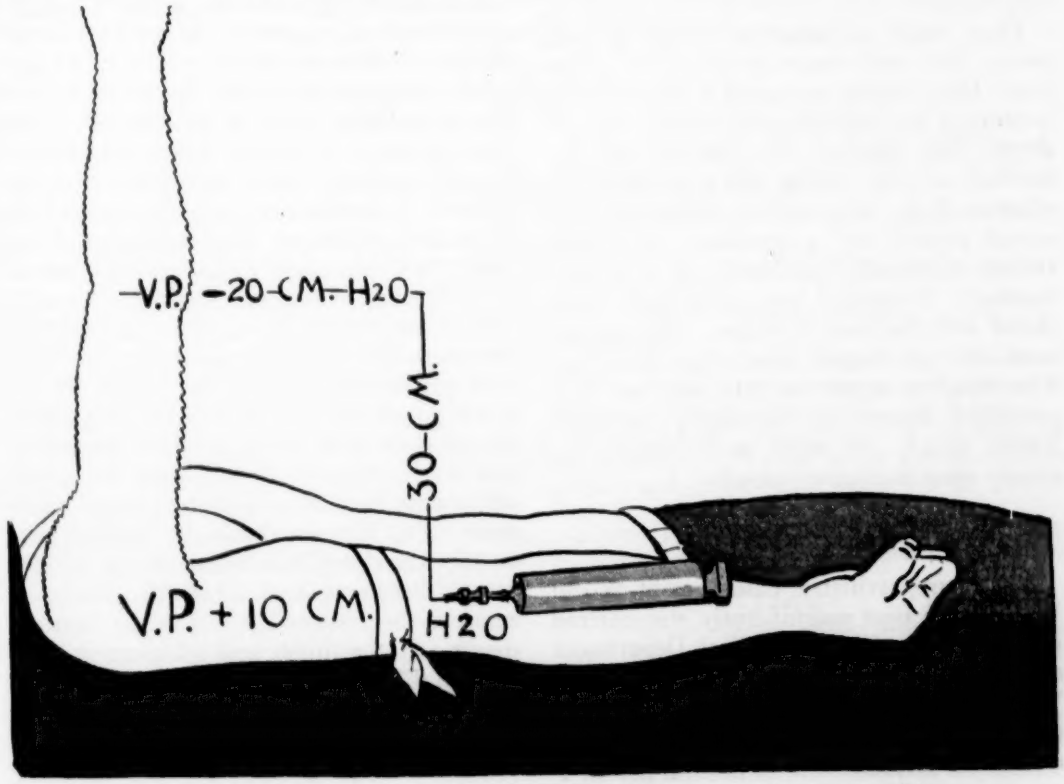

FIG. 2.—Venous pressure changes in the antecubital vein with a change of position.

was not completely well, he was classified as improved; (3) the remainder of the patients were classed as no remission.

The results of therapy with insulin shock and ECT are presented in Table 1. It may be seen that the remission rate with either ECT or insulin was approximately the same, 79 and 77%. However, the percentage of complete remissions with insulin was slightly in excess of that with ECT. A small group of patients who showed no remission with either treatment, did achieve improvement when the other type of therapy was tried. The largest percentage of patients were classified either as catatonic or paranoid dementia præcox, and there seemed to be no significant difference in the remission rate of the various types.

TABLE 1

RESULTS OF SHOCK THERAPIES

(In percentage)

Therapy	Complete remission	Improved	No remission
Insulin	33	44	23
ECT	25	54	21
Insulin and ECT.....	12	60	28

There were no fatalities in the present group. We have encountered 3 complications. One patient sustained a comminuted fracture of the right humerus during electroshock. The surgical care was entirely uneventful and the patient had a complete remission from his mental symptoms. A second patient had a recurrence of a previously dislocated jaw during the first electroshock. Treatment was successfully completed with the use of curare. One patient went into prolonged shock for 96 hours. The complete report on this case has been published separately (Goldfarb, Laughlin, Kiene, 1944). He made an uneventful recovery after the acute episode.

DISCUSSION

The neuropsychiatric casualties of World War I have been magnificently summarized in Volume X of "The Medical Department of the United States Army in the World War." The reports from the various hospitals described neurotic and psychotic syndromes associated with ordinary military life and combat which are identical with the material seen in this war. The conception of the war neurosis as a defensive mechanism was discussed on pages 370 to 378. However, despite the fact that considerable spontaneous remission occurred among the "psychotics," the cases were still considered to be similar to the civilian type of psychosis. The following summary is quoted from the report of one of the installations:

> In the manic-depressive psychoses group, insofar as it was possible to obtain reliable information, 35 had had a previous attack. It must be remembered, however, that the number of patients who had had previous attacks was undoubtedly greater, but as many of the patients were entirely inaccessible, information in regard to this could not be obtained. The depressions predominated. . . . . Many of the patients presented a typical schizophrenic history, but were in an apparently normal condition and well adjusted. Some of them gave quite adequate explanations for their upset, such as nostalgia and worry over misfortune at home. Others stated that they had been unfairly treated in the Army. The eventual outcome appeared to be problematical. It was felt that the original diagnosis should be left unchanged. (Page 109.)

The military life, both non-combat and combat, is a psychological traumatic experience for many individuals. We have had the opportunity of observing the various mechanisms of defense against traumatic experiences encountered in the Army, and since this installation received patients after they were screened in other hospitals, the psychological reactions were necessarily the extremely incapacitating ones. Because of the close association of the psychological response with the particular situational trauma of army life, it was not surprising that the course and prognosis of the psychotic-like reactions often differed markedly from those seen in civil practice. Duval and Hoffmann (1941) described the acute explosive course of dementia præcox in military personnel, and we have noted the following additional differences in their response to shock treatment: (1) the psychotic in military life usually developed the illness as he left the area of his home, and the disease tended to remit as he returned to his home environment; (2) the simple and hebephrenic types showed the same rate of remission with shock therapy as did the paranoid and catatonic types. The latter in civilian practice usually had the best prognosis. It was interesting

in this respect that we included a group of 4 cases in this report who were first hospitalized in an army hospital in Egypt over a year before they received insulin shock treatment. Of these 4 cases, only 1 improved with treatment. Although these numbers are not sufficient for any mathematical evaluation, a remission rate of 25% for cases of over a year duration is comparable with the reports of treatment in civilian cases; (3) the remission rate of 79% in the group treated with electroshock was far in excess of any remission rate reported for cases seen in civil population (Smith *et al*, 1943); (4) many of these cases diagnosed as dementia præcox showed a predominance of the schizoid reaction with a mixture of a large affective component which was not characteristic of the average schizophrenic seen in civil life (Bleuler, 1923).

The question of a situational precipitant was considered in these cases. In the bulk of the non-combat cases, the patients were in service for over a year. We therefore eliminated the factors of adjustment that they had to face when they entered the Army (Maskin and Altman, 1943). The soldier had already made his adjustment to the confining situation of the Army with its various social, economic and sexual limitations. However, numerous patients in our group showed the initial symptoms at the port of embarkation in the States, on the boat, or soon after they arrived in the European theater of operations. A history of many of these cases revealed, however, that their service in the States had been at a post near their home, or that they had taken their families with them to the vicinity of the post. In these cases, transfer to the combat zone produced the same psychic trauma of being alone that most soldiers first experienced when they were inducted in the Army. There was a considerable group of patients who developed the psychotic reaction after some time in the European theater, but in whom there was a definite history of poor adjustment throughout their stay in the theater. Two types of history were most frequently elicited. The first was that of the soldier who could not adjust to the social and sexual activity commonly enjoyed by his fellow soldiers, and who was thrown back upon himself and became more and more seclusive. This patient was usually conscientious, religious and over-scrupulous. The second was that of the soldier who either created difficulties, usually sexual, with the civil population in England, or had domestic difficulties with his family in the States since his departure. The improvement of these cases with therapy was almost uniformly good. The efficacy of the shock treatment compared with the fact that the patients were going to be evacuated to the States was always a question. However, many of the patients were not informed of their disposition until treatment was terminated. The immediate improvement which followed shock treatment usually influenced the examiners toward giving these patients the benefits of therapy.

Summary

1. The case histories of psychotics in the military personnel, and the effect of the shock therapies was reviewed and analyzed. The response to treatment was found to differ markedly from the response observed in civil practice.

2. Various modifications of technique were described and illustrated.

BIBLIOGRAPHY

1. Bennett, A. E. Preventing traumatic complications in convulsive shock therapy by curare. J. A. M. A., **114**:322, 1940.

2. Bleuler, E. Lehrbuch der Psychiatrie. Berlin, 1923.

3. Cobb, S. Foundations of Neuropsychiatry. Baltimore, 1941.

4. Cook, L. C. Convulsion therapy. J. Ment. Sc., **90**:435, 1944.

5. Duval, A. M., and Hoffman, J. L. Dementia præcox in military life as compared with dementia præcox in civil life. War Med., **1**:854, 1941.

6. Goldfarb, W. The effect of various modes of administration of insulin on the hypoglycemia in patients undergoing insulin shock therapy. Am. J. Psychiat., **99**:698, 1943.

7. Goldfarb, W., and Bowman, K. M. Vitamin B_1 requirement during insulin shock therapy. Ibid, **98**:393, 1941.

8. Goldfarb, W., Laughlin, J. M., and Kiene, H. E. Prolonged insulin shock. Report of a case. 1944. (In press.)

9. Maskin, M. H., and Altman, L. L. Military psychodynamics. Psychological factors in the transition from civilian to soldier. Psychiatry, **6**:263, 1943.

10. von Meduna, L. Zur Bedeutung des epileptischen Anfalls als therapeutischen Faktor in der

medikamentosen Shock-Therapie der Schizophrenie. Klin. Wchnschr, 17:96, 1938.

11. Miller, W. R. Relationship between early schizophrenia and neuroses. Am. J. Psychiat, 96:887, 1940.

12. Sakel, M. Psychotherapeutic effect by chemical agents. Arch. Res. Nerv. and Ment. Dis. 19:340, 1939.

13. Smith, L. H., Hastings, D. W., and Hughes, J. Immediate and follow-up results of electroshock therapy. Am. J. Psychiat, 100:351, 1943.

14. Tennent, T. Insulin therapy. J. Ment. Sc., 90:465, 1944.

15. The Medical Department of the United States Army in the World War. Vol. X. Neuropsychiatry, 1929.

THE PHYSICIAN AND THE FEDERAL NARCOTIC LAW*

H. J. ANSLINGER

United States Commissioner of Narcotics, Washington, D. C.

1. Types of Narcotic Drugs Covered

Narcotic drugs covered by the law are those included within the classification opium, coca leaves, and any compound, salt, derivative or preparation thereof.[1] They include, for instance, all of the alkaloids and salts of opium, whether of the phenanthrene or isoquinoline groups. By an amendment approved July 1, 1944, to the Federal law isonipecaine, a synthetic substitute for morphine, was added to this classification and is therefore subject to the operation of the Federal narcotic law in the same manner as is morphine. Isonipecaine is defined as 1-methyl-4-phenyl-piperidine-4-carboxylic acid ethyl ester, or any salt thereof, by whatever trade name designated.[2]

2. International Action

Modern narcotic drug legislation is the result of the efforts of our government to give full effect to its obligations under the international conventions to which it is a party.[3] The first of these important international agreements is known as the International Opium Convention of 1912.[4] Under this convention the contracting powers assumed the obligation, among others, to enact pharmacy laws or regulations to limit exclusively to medical and legitimate purposes the manufacture, sale and use of morphine, cocaine, and their respective salts unless laws or regulations on the subject were already in existence. The contracting powers were obligated to cooperate with one another to prevent the use of these drugs for any other purpose.

In 1925 the second international convention on the subject of narcotic drugs was signed at Geneva on behalf of a number of World Powers, not including the United States, this agreement being described as the International Opium Convention adopted by the Second Opium Conference (League of Nations), signed at Geneva February 19, 1925.[5] This Convention sought to make more specific the obligations of the 1912 Convention, notably in the control of international trade in narcotics, and established a Permanent Central Board with certain functions in connection with the supply, and international movement of narcotic drugs. Our government did not sign or ratify this convention at the time, because it did not give effect to the principle, advanced by the United States, of direct control of production of the source raw material (the opium poppy and the coca leaf). However, in Article 31 it was provided that the present (1925) convention replaces, as between the contracting parties, the provisions of Chapters I, III and V of the Convention signed at The Hague on January 23, 1912, which provisions remain in force as between the contracting parties and any States parties to the said Convention which are not parties to the present Convention. The United States fully cooperated with the contracting powers which had ratified the 1925, as well as with those which had merely ratified the 1912, Convention, in international action looking toward control of the narcotic drug traffic. Our government, as a matter of fact, had already adopted legislative measures which gave effect to the provisions of the 1925 Convention, pursuant to the obligations assumed under the 1912 Convention.

A third international agreement, concluded at Geneva July 13, 1931, was the Convention for Limiting the Manufacture and Regulating the Distribution of Narcotic Drugs.[6] The ratification by the United States of this Convention was deposited at Geneva

---

*This paper is one of a series dealing with "scientific proof and relations of law and medicine" (second series). The first series was published in 1943. The symposium consists of studies by legal and medical authorities, each paper appearing approximately simultaneously in a prominent medical and a prominent legal journal.

The paper here presented is published also in the Tulane Law Review.

[1] 26 U. S. C. 2550.

[2] 26 U. S. C., Supp. IV, 2550, 3228.

[3] Foreign Relations of the United States, 1914, p. 931.

[4] Treaty Series No. 612; 38 Stat. 1912, 1930.

[5] League of Nations Treaty Series No. 1845, Vol. 81, p. 319.

[6] Treaty Series No. 863; 48 Stat. 1543.

on April 28, 1932, and was proclaimed by the President July 10, 1933. The outstanding feature of this Convention is that it obligates each High Contracting Party to furnish annual estimates to a Supervisory Body of its requirements for narcotic drugs, based solely on the medical and scientific requirements of the country, and limits manufacture of the drugs to the total requirements thus estimated. The Convention incorporates and therefore in effect adopts certain provisions of the preceding 1925 Convention. It further obligates the High Contracting Parties to take all necessary legislative or other measures in order to give effect within their countries to the provisions of the Convention. Another important and interesting feature of the Convention is the imposition of a special obligation upon each of the High Contracting Parties to create a special administration for the purpose of (a) applying the provisions of the Convention; (b) regulating, supervising and controlling the trade in the drugs; and (c) organizing the campaign against drug addiction, by taking all useful steps to prevent its development and to suppress the illicit traffic.

3. Federal Narcotic Statutes

The two principal Federal narcotic statutes are the Act of May 26, 1922, known as the Narcotic Drugs Import and Export Act, as amended,[7] and the so-called Harrison Narcotic Law, now incorporated in the Internal Revenue Code.[8] The Narcotic Drugs Import and Export Act authorizes the importation of such quantities only of opium and coca leaves as the Commissioner of Narcotics shall find to be necessary to provide for medical and scientific needs. Importation of any form of narcotic drug, except such limited quantities of crude opium and coca leaves, is prohibited. Exportation of manfactured drugs and preparations is permitted under a rigid system of control designed to assure their use for medical needs only in the country of destination.

The Harrison Narcotic Law as reenacted in the Internal Revenue Code is designed to direct the manufacture and distribution of narcotic drugs through medical channels to consumption use for medical purposes only. This statute and the regulations promulgated thereunder[9] more directly affect the practicing physician and will be the basis of the following discussion:

4. Registration

(*a*) *Qualification Prerequisite*

A physician who intends to practice medicine and to administer or dispense narcotic drugs in the course of such practice must apply for registration under the Harrison Law with the Collector of Internal Revenue of the district in which he proposes to practice, and must pay the appropriate occupational tax for the fiscal year applicable. Before being entitled to such registration, however, he must be lawfully entitled under the laws of the State or Territory or district wherein he intends to practice, to distribute, dispense, give away or administer narcotic drugs to patients upon whom he, in the course of his professional practice is in attendance.[10] In the case of a medical practitioner, this requirement usually means that the applicant is a physician who holds an unrevoked and unrestricted license to practice medicine in the particular State, Territory or district. To be entitled to registration, however, in the case of any type of practitioner of the healing art, it must appear that he is entitled under the State laws to distribute, administer or dispense narcotic drugs to patients whom he is professionally attending. "The right to register and pay tax under the Federal statute depends on the right to dispense under the State laws."[11]

(*b*) *Inventory Required*

Every person making application for registry or re-registry as a physician shall, as of December 31 preceding the date of his application, or any date between December 31 and the date of applying for such registry or re-registry, prepare under oath or affirmation, in duplicate, an inventory of all narcotic

[7] 21 U. S. C. 171-185.
[8] 26 U. S. C. 2550-2565, 3220-3228.
[9] 26 C. F. R. 151.1-151.205; 26 C. F. R., Cum. Supp., 151.54-151.185.
[10] 26 U. S. C. 3220.
[11] Perry *v.* Larson, 104 F. (2d) 728; Waldo *v.* Poe, 14 F. (2d) 749; Bruer *v.* Woodworth, 22 F. (2d) 577; Burke *v.* Kansas State Osteopathic Assn., 111 F. (2d) 250; Georgia Assn. of Osteopathic Physicians and Surgeons *v.* Allen, 112 F. (2d) 52; Cavanagh *v.* Fowler, 146 F. (2d) 961.

drugs and preparations on hand at the time of making such inventory. The inventory shall be prepared on Form 713, copies of which may be obtained from Collectors of Internal Revenue upon request. The original inventory shall be forwarded to the Collector with the application for registration, and the duplicate shall be kept on file by the maker for a period of two years.

(c) *Special Tax Stamp*

Upon approval of the application for registration the Collector of Internal Revenue will assign a registry number to the applicant and will issue him a special tax stamp in Class IV as a practitioner. This special tax stamp must be kept posted conspicuously on the premises covered by the registration, *i. e.*, the physician's office.

(d) *Change of Location of Office*

A physician registrant who changes the location of his office shall, within 30 days, execute a new return on Form 678-A, marking it "Revised Registry." The return shall set forth the date of change and the new name or address. The return shall be forwarded with the special tax stamp to the Collector who issued the stamp for recording the change. If the removal is to another State, Territory or district, the physician must, of course, be qualified in the new location to administer, dispense or distribute narcotic drugs to patients, which usually means that he must also be licensed to practice medicine in the new location.

5. Dispensing and Prescribing—in General

(a) *Direct Dispensing or Administration*

A physician may obtain narcotic drugs for direct dispensing or administration to patients only on official order forms. He may not obtain narcotic drugs on a so-called prescription for general office use. Official order forms are obtainable from the Collector of Internal Revenue in a book of ten originals and duplicates, for ten cents. The form is to be prepared in duplicate and signed by the physician, the original copy being forwarded to a qualified manufacturer or wholesaler, and the duplicate retained by the physician for a period of two years subject to inspection by a duly authorized Federal or State narcotic officer. The order form may be prepared in typewriting, ink or indelible pencil, but not by the use of an ordinary lead pencil.

(b) *Prescribing*

A physician may issue for a bona fide patient, for medical purposes only, a prescription for narcotic drugs which may be filled by a qualified retail dealer (druggist).

6. Prescriptions

(a) *Formal Requirements*

A prescription for narcotic drugs shall be dated as of and signed on the date when issued and shall bear the full name and address of the patient and the name, address and registry number of the practitioner. A physician may sign a prescription in the same manner as he would sign a check or legal document, as, for instance, J. H. Smith, John H. Smith, or John Henry Smith. Prescriptions should be written with ink or indelible pencil or typewriter; if typewritten, they shall be signed by the practitioner. The refilling of a prescription for taxable narcotic drugs is prohibited.

(b) *Misuse of Prescription Form as an Order Form*

A physician must not use his prescription form to obtain narcotic drugs for general office practice. Narcotic drugs desired for general office practice are obtainable on official order form, as above described, from a qualified manufacturer or wholesale dealer. An order for narcotic drugs for general office practice, written on a prescription blank, is not a lawful prescription within the meaning of the law and can have no effect to validate the sale which is illegal.

(c) *Fictitious Names*

When the names of fictitious patients are discovered on narcotic drug prescriptions filed with a druggist it is usually a clear indication of wilful catering to drug addiction,

whether or not the so-called prescriptions are also discovered to be forged. Sometimes the physician will insert a fictitious patient's name, however, because he wishes to conceal from the druggist the fact that the real patient is consuming drugs, notwithstanding that the real patient is claimed to have a bona fide medical need therefor. The law does not permit the use of a fictitious patient's name upon a prescription.

(*d*) *Telephone Orders*

The furnishing of narcotic drugs pursuant to telephone advice of practitioners is prohibited, whether prescriptions covering such orders are subsequently received or not, except that in an emergency a druggist may deliver narcotic drugs through his employee or responsible agent pursuant to a telephone order, provided the employee or agent is supplied with a properly prepared prescription before delivery is made, which prescription shall be turned over to the druggist and filed by him as required by law.

(*e*) *Safeguarding Blanks for Narcotic Drugs*

A physician's prescription blanks should be most carefully safeguarded and never left where persons who may be drug addicts will have opportunity to take them, and to prepare and have filled forged narcotic prescriptions. A physician's official order forms should be likewise safeguarded, and great care should be exercised by the physician in keeping his stock of narcotic drugs secure from robbery or pilfering. The medicine case of morphine tablets should never be left in an unattended automobile.

7. Professional Practice in Prescribing or Dispensing Narcotic Drugs

(*a*) *Constitutionality of the Harrison Narcotic Law*

The constitutionality of the Harrison Narcotic Law was first challenged before the United States Supreme Court in 1919 by Dr. C. T. Doremus of Texas. Dr. Doremus had been indicted under section 2 of the Act (now section 2554, of Title 26 of the United States Code). The Supreme Court sustained the constitutionality of section 2 as having reasonable relation to the raising of revenue, and stated that the Act "may not be declared unconstitutional because its effect may be to accomplish another purpose as well as the raising of revenue." [12]

In 1927, the constitutional validity of section 1 of the Act (now section 2553, of Title 26 of the United States Code) was questioned by a defendant, not a physician, who had been convicted of purchasing narcotic drugs not in or from the original tax stamped packages. The Supreme Court affirmed the constitutionality of the challenged section.[13]

In 1928, a defendant who was not a physician again challenged the constitutional validity of section 2 of the Act, notwithstanding the previous Doremus decision, and the Supreme Court reaffirmed the constitutionality of this section.[14]

(*b*) *Professional Practice as Applied to Drug Addiction*

In a leading case decided March 3, 1919, the Supreme Court enunciated an important principle in connection with the meaning of the words "professional practice" as used in section 2 of the Harrison Act.[15] In this case Webb was a practicing physician and Goldbaum a retail druggist in Memphis. It was Webb's regular custom and practice to prescribe morphine for habitual users upon their application to him therefor. He furnished these prescriptions not after consideration of the applicant's individual case and in such quantities and with such direction as, in his judgment, would tend to cure the habit, or as might be necessary or helpful in an attempt to break the habit, but with such consideration and in such quantities as the applicant desired for the sake of continuing his accustomed use. Goldbaum was familiar with such practice and habitually filled such prescriptions. Within a period of eleven months Goldbaum purchased from wholesalers in Memphis thirty times as much mor-

[12] United States *v.* Doremus, 249 U. S. 86.

[13] Harry R. Alston *v.* United States, 274 U. S. 289.

[14] Frank Nigro *v.* United States, 276 U. S. 332.

[15] Webb and Goldbaum *v.* United States, 249 U. S. 96.

phine as was bought by the average retail druggist doing a larger general business, and he sold narcotic drugs in 6,500 instances. It was also shown that during the same period Webb had issued and Goldbaum had filled over 4,000 such narcotic prescriptions, and that a certain user of the drugs had applied to Webb for morphine and was given at one time ten so-called prescriptions for one gram each, which prescriptions were filled at one time by Goldbaum although each was made out in a separate fictitious name. The United States Circuit Court of Appeals, upon this statement of fact, propounded the following question to the United States Supreme Court:

> If a practicing and registered physician issues an order for morphine to an habitual user thereof, the order not being issued by him in the course of professional treatment in the attempted cure of the habit, but being issued for the purpose of providing the user with morphine sufficient to keep him comfortable by maintaining his customary use, is such order a physician's prescription under exception (b) of section 2 (of the Harrison Act)?

To this question the Supreme Court answered, "To call such an order for the use of morphine a physician's prescription would be so plain a perversion of meaning that no discussion of the subject is required. That question should be answered in the negative."

The Supreme Court emphasized this rule in a later case involving the prescribing of narcotics by a practitioner for an adict, by holding in part as follows:

> Manifestly the phrases "to a patient" and "in the course of his professional practice only" are intended to confine the immunity of a registered physician, in dispensing the narcotic drugs mentioned in the Act, strictly within the appropriate bounds of a physician's professional practice, and not to extend it to include a sale to a dealer or a distribution intended to cater to the appetite or satisfy the craving of one addicted to the use of the drug. A "prescription" issued for either of the latter purposes protects neither the physician who issues it nor the dealer who knowingly accepts and fills it.[16]

In the Dr. Morris Behrman case[17] decided by the Supreme Court in 1922, the defendant was charged with unlawfully selling to an addict by means of three so-called prescriptions, 150 grains of heroin, 360 grains of morphine, and 210 grains of cocaine, with the intent that the addict would use the same by self-administration in divided doses over a period of several days. The indictment did not in terms challenge the good faith of the physician and did not contain the allegation that the prescriptions were not issued in the course of professional practice only. A demurrer to the indictment was sustained in the District Court and the case was appealed to the United States Supreme Court. The Supreme Court pointed out that the quantities of narcotics named in the indictment were charged to have been entrusted to a person known by the physician to be an addict, without restraint upon him in its administration or disposition by anything more than his own weakened and perverted will. Such so-called prescriptions, said the court, could only result in the gratification of a diseased appetite for these pernicious drugs, or result in an unlawful parting with them to others, in violation of the Act as heretofore interpreted in this court, within the principles laid down in the Webb and Jim Fuey Moy cases. Notwithstanding the omissions in the indictment, therefore, the court held that the acts charged constituted offenses within the terms and meaning of the Act, and the judgment of the District Court to the contrary was reversed.

(*c*) *The Linder Case*

The effect of the decision of the Supreme Court in the Dr. C. O. Linder case[18] has been misunderstood by some physicians, who evidently regarded the decision as authority to cater to drug addiction as such notwithstanding previous decisions of the court which declared this activity not within the course of professional practice of a physician. Dr. C. O. Linder was charged with the unlawful sale to an addict of one tablet of morphine and three tablets of cocaine for self-administration in divided doses over a period of time. Here, as in the Behrman case, the indictment did not specifically challenge the good faith of the physician, or negative that

[16] Jin Fuey Moy *v.* United States (1920), 254 U. S. 189.

[17] United States *v.* Morris Behrman (1922), 258 U. S. 280.

[18] C. O. Linder *v.* United States (1925), 268 U. S. 5.

the sale was in the course of professional practice only. The quantity of drugs sold was, of course, far less than the quantity prescribed by Dr. Behrman. Dr. Linder was convicted but when his case reached the Supreme Court the judgment of conviction was reversed.

In the course of the opinion there was discussion that direct control of medical practice in the States is beyond the power of the Federal Government, and that incidental regulation of such practice by Congress through a taxing act cannot extend to matters plainly inappropriate and unnecessary to reasonable enforcement of a revenue measure. But the court had first significantly noted that the indictment "does not question the doctor's good faith nor the wisdom or propriety of his action according to medical standards," and that "it does not allege that he dispensed the drugs otherwise than to a patient in the course of his professional practice or for other than medical purposes." In concluding the opinion, therefore, the court stated

> We find no facts alleged in the indictment sufficient to show that petitioner had done anything falling within definite inhibitions or sufficient materially to imperil orderly collection of revenue from sale. . . . . The unfortunate condition of the recipient certainly created no reasonable probability that she would sell or otherwise dispose of the few tablets entrusted to her; and we cannot say that by so dispensing them the doctor necessarily transcended the limits of that professional conduct with which Congress never intended to interfere.

All that the Linder case holds, therefore, is that in the absence of an allegation in the indictment negativing good faith and professional practice, the court cannot supply the omission by holding as a matter of law that the sale of four tablets of narcotics necessarily transcends the limits of professional practice. The court could so hold, in the Behrman case, because the quantities were so large as to preclude any possibility that they were prescribed professionally.

It follows, therefore, that where the indictment challenges the good faith and professional practice of a physician who prescribes or directly sells narcotic drugs for the purpose of merely gratifying and perpetuating narcotic drug addiction as such and if convicted of such an offense, the judgment of conviction will stand and a number of United States Circuit Courts of Appeal [19] have so held in cases involving convictions of physicians which reached these intermediate appellate courts after the Linder case was decided, and in which the Linder decision was urged as exculpating the convicted physician.

(*d*) *The A. W. Boyd Case*

One year after its decision in the Linder case, the Supreme Court rendered its decision in the case of Dr. A. W. Boyd,[20] in which the physician had been convicted on six counts of an indictment charging unlawful sales by means of prescriptions issued not in good faith and not in the course of his professional practice. These prescriptions were issued for 30 to 48 grains each to two named drug addicts. It was established that the physician purchased and distributed over 15,000 grains of morphine between May 1 and September 30, and that he issued prescriptions on much the same scale during that period. The court pointed out that the disputed question was whether the defendant issued the prescriptions in good faith in the course of his professional practice. The Government's evidence tended strongly to show that the prescriptions were for quantities many times in excess of what, according to any fair medical standards, reasonably could be put into the possession of confirmed addicts, even when treating them for the addiction or endeavoring to relieve them from suffering incident to it. Much of the defendant's evidence tended to show that he issued the prescriptions in good faith in the course of professionally treating the recipients for their addiction and endeavoring to relieve them from its incidents, but the court noted that some of the evidence submitted in behalf of the defendant was pronouncedly corroborative of that for the Government. The court, in sustaining the judgment of conviction, quoted with implied approval the charge to the jury which had been made at

[19] Boehm *v.* United States (1927), 21 F. (2d) 283; Nelms *v.* United States (1927), 22 F. (2d) 79; DuVall *v.* United States (1936), 82 F. (2d) 382; Freeman *v.* United States (1936), 86 F. (2d) 243; Hawkins *v.* United States (1937), 90 F. (2d) 551.

[20] A. W. Boyd *v.* United States, 271 U. S. 104

the request of the defendant's counsel, as follows:

> I am requested to say to you, gentlemen, that in determining whether or not the defendant in prescribing morphine to his patients was honestly seeking to cure them of the morphine habit while applying his curative remedies, it is not necessary for the jury to believe that the defendant's treatment would cure the morphine habit, but it is sufficient if defendant honestly believed his remedy was a cure for this disease.
>
> I instruct you that if this is true, regardless of whether the course of treatment given by this defendant is a cure, the question is, was he honestly and in good faith in the course of his professional practice and in an effort to cure disease issuing these prescriptions.

This charge certainly was as fair as the defendant could have wished, but the jury, under all the evidence submitted, could hardly have done otherwise than convict.

(*e*) *The Peter Young Case*

Dr. Peter Young had been convicted on eight counts of an indictment charging sales of quantities of certain conditionally exempt narcotic preparations [21] without having kept a record of the sales. Actually the total quantities of these narcotic preparations sold by the physician were large but unfortunately, from the standpoint of a proper presentation of the merits of the case, the indictment did not question the good faith or professional propriety of the unlawful sales charged. When this case reached the Supreme Court, it was necessarily considered on the theory that the physician dispensed or administered preparations to patients whom he personally attended, and the question of whether the dispensing or administration was in the course of professional practice was not before the court. Thus considered, the court reversed the judgment of conviction holding that physicians administering the preparations to patients whom they personally attended were not required to keep records of the preparations so administered.

(*f*) *The Professional Practice Rule In Intermediate Appellate Courts*

Subsequent to the decision of the Supreme Court in the A. W. Boyd case, the several Circuit Courts of Appeals have applied the principle enunciated in that case in rendering decisions appealed to them by physicians who have been convicted under the Harrison Narcotic Law.[22] In the DuVall case the Circuit Court of Appeals for the Ninth Circuit quoted with approval the following instruction to the jury which applies and interprets the principle:

> If the prescriptions were issued in good faith and according to fair medical standards, in the curing of disease, and not merely to satisfy the cravings of the said persons for such drugs, then they may be said to have been issued in the course of the defendant's professional practice only; but if the prescriptions were not issued in good faith, but were issued to enable such person to obtain morphine sulphate to satisfy his appetite and cravings for such drugs only, and not in the treatment of his patient, then the issuance of such prescriptions would not be in good faith nor in the course of the defendant's professional practice as a physician, and the sale and dispensing upon such prescriptions would not be lawful.

8. Ambulatory Treatment for Drug Addiction

(*a*) *Legal and Medical Views*

The ambulatory treatment for the cure of drug addiction has always been disapproved by the United States Bureau of Narcotics because its observation and experience have shown that the object of the treatment is practically never achieved. The average drug addict who purports to undergo this treatment will invariably seek other sources of supply as his dosage is reduced. It will be recalled that the Supreme Court in the Behrman case [17] called attention to the danger of entrusting quantities of narcotic drugs to a known addict "without restraint upon him in its administration or disposition by anything more than his own weakened and perverted will." The Supreme Court in the Behrman case at least impliedly disapproved the procedure which is applied in pursuing the so-called ambulatory treatment for the cure of drug addiction, and in 1924 in a case involving the conviction of Dr. Addison

[21] 26 U. S. C. 2551.

[22] DuVall *v.* United States (1936), 82 F. (2d) 382; Ratigan v. United States (1937), 88 F. (2d) 919; United States *v.* Lindenfelt (1944), 142 F. (2d) 829; United States *v.* Abdallah (1945) 149 F. (2d) 219.

D. Hobart [23] the Circuit Court of Appeals for the Sixth Circuit construed the Behrman decision as condemning the ambulatory treatment as unlawful, as follows:

> The case of United States *v.* Behrman, 258 U. S. 280, destroys the theory of the defense upon the present trial. Since that decision, there is no possibility that conduct such as Hobart admitted, could be lawful. The patient was not under restraint. Hobart furnished to him at frequent intervals and for self-administration, large quantities of morphine, though in quantities diminishing from one time to another; but the patient was at liberty to apply to other doctors and get as many other similar prescriptions as he could. In the case cited, the Supreme Court declared that this conduct by a physician was ipso facto violation of the law. . . . .

Scientific medical opinion appears to be in harmony with the opinion of the court that disapproved the ambulatory treatment for cure of drug addiction. In 1924, the Reference Committee on Legislation and Public Relations recommended that the House of Delegates of the American Medical Association approve Recommendation No. 8 of the Committee on Narcotic Drugs of the Council on Health and Public Instruction.[24] The report of the Reference Committee was adopted as presented. Recommendation No. 8 of the Report of the Committee on Narcotic Drugs of the Council on Health and Public Instruction submitted by the Council to the House of Delegates at the Boston session, 1921, is as follows:

> 8. Your committee desires to place on record its firm conviction that any method of treatment for narcotic drug addiction, whether private, institutional, official or governmental, which permits the addicted person to dose himself with the habit-forming narcotic drugs placed in his hands for self-administration, is an unsatisfactory treatment of addiction, begets deception, extends the abuse of habit-forming narcotic drugs, and causes an increase in crime. Therefore, your committee recommends that the American Medical Association urge both federal and state governments to exert their full powers and authority to put an end to all manner of such so-called ambulatory methods of treatment of narcotic drug addiction, whether practiced by the private physician or by the so-called "narcotic clinic" dispensary.
>
> In the opinion of your committee, the only proper and scientific method of treating narcotic drug addiction is under such conditions of control of both the addict and the drug, that any administration of a habit-forming narcotic drug must be by, or under the direct personal authority of the physician, with no chance of any distribution of the drug of addiction to others, or opportunity for the same person to procure any of the drug from any source other than from the physician directly responsible for the addict's treatment.

(*b*) *Recognized (Institutional) Treatment*

The most practicable plan of applying the only proper and scientific method of treating narcotic drug addiction under the conditions laid down by the Committee on Narcotic Drugs of the Council on Health and Public Instruction, is to establish an institution properly staffed and equipped for the purpose. By the Act of Congress approved January 19, 1929,[25] provision was made for, and there were later constructed and put into operation, two institutions located at Lexington, Kentucky, and Fort Worth, Texas, respectively, for the treatment and rehabilitation of narcotic drug addicts, under the supervision of the United States Public Health Service. The facilities of these two institutions, available primarily for prisoner-addicts are also made available for voluntary applicants, even if they are unable to pay a nominal sum representing part of the cost of the treatment. A large number of drug addicts, including some physicians, have received treatment and rehabilitation in these institutions.

9. Federal Investigative Procedure

(*a*) *Primary Purpose*

The primary purpose of Federal investigative procedure, as far as the physician is concerned, is to prevent diversion of narcotic drugs from medical channels to abusive use. Thus it becomes necessary to investigate, and to report to legal procedure to penalize that physician who wilfully prescribes or directly sells narcotic drugs merely for the gratification and perpetuation of narcotic drug addiction.

(*b*) *Prerequisite to Investigation of a Physician*

No investigation of a criminal violation on the part of a physician is permitted to be

[23] Hobart *v.* United States, 299 Fed. 784.

[24] Journal, American Medical Association, **82**: 1967, 1924.

[25] 21 U. S. C. 221-237.

made by an officer of the Bureau of Narcotics unless such investigation is based on well-founded suspicion, strong circumstances, or trust-worthy and reliable information that such violation is being committed. Furthermore, no field officer of the Bureau of Narcotics is permitted to initiate any such investigation as above described except upon written instructions from his superior officer, the District Supervisor of the District.

(c) Rule Established by Federal Courts

A defense quite frequently sought to be interposed by a physician indicted for unlawful sales of narcotic drugs is that he was illegally entrapped by the officers into committing the offenses charged against him. The United States Circuit Courts of Appeals have consistently rejected such claims on the part of defendant physicians, holding in effect that it does not constitute illegal entrapment for the officer to afford an opportunity for the physician to sell narcotic drugs if the sale was the defendant's free voluntary act.[26] The rule which was applied by the United States Circuit Court of Appeals for the Eighth Circuit in the case of W. V. Smith, *et al. v.* United States is even more liberal than the procedure outlined by the Bureau limiting its field officers in making investigations of violations on the part of physicians. The Circuit Court of Appeals in the W. V. Smith case quoted with approval the following charge to the jury in that case:

> It is no enticement to ask a physician to write an illegal prescription, if you suspect that he might do it, and you want to find out if he does it, nor to ask a druggist to sell narcotics illicitly, because both of them know better, and if they are going to obey the law, why they won't do that in response to any form of petition or inducement, and it is perfectly within the rights of investigating officers to determine, by means that have been here disclosed, whether a party, or parties, are engaged in violation of the law, and if they are, to take steps accordingly, so that I wish to disabuse your minds of all this confusion that this, in itself, was such an unwarrantable offense on the part of Federal officers that it relieves this offense charged, if you find any offense was committed, of its character as such offense.

[26] Ratigan *v.* United States (1937), 88 F. (2d) 919; W. V. Smith, *et al. v.* United States (1922), 284 Fed. 673; Newman *v.* United States (1924), 299 Fed. 128; Hodge *v.* United States (1926), 13 F. (2d) 596; Mitchell *v.* United States (1944), 143 F. (2d) 953; United States *v.* Abdallah (1945), 149 F. (2d) 219.

10. Uniform State Narcotic Law

The National Conference of Commissioners on Uniform State Laws after several years' study completed in 1932 the final draft of a Uniform Drug Act which it thereupon recommended for enactment in all the States. This act has been adopted, in some cases with a few changes, by 42 States, by Congress for the District of Columbia, and by the Territories of Alaska, Hawaii, and Puerto Rico. The States of California and Pennsylvania which have not adopted the Uniform State Narcotic Law, nevertheless have in effect other State narcotic legislation which the Bureau of Narcotics considers of comparable effectiveness. The States of Massachusetts, New Hampshire, Kansas, and Washington have not adopted the Uniform State Narcotic Law but have in effect State narcotic legislation which the Bureau of Narcotics does not consider comparable in effectiveness to the Uniform Law.

The Uniform State Narcotic Law provides a comprehensive plan for intrastate control of the narcotic drug traffic, and is designed generally to restrict narcotic drugs to medical channels from the manufacturer or distributor within the State to the consumer for bona fide medical purposes. The act differs from the Federal law in some respects. For instance, it requires manufacturers of and wholesale dealers in narcotic drugs to obtain a license from the appropriate State agency and prescribes certain qualifications for these licensees, and it directly and specifically penalizes the forgery or alteration of a narcotic prescription. In so far as the professional use of narcotic drugs is concerned, however, the statutory standard is practically the same as that provided by the Federal narcotic law. Thus, under the Uniform Act, a physician in good faith and in the course of his professional practice only is permitted to prescribe, administer and dispense narcotic drugs, or may cause the same to be administered by a nurse or intern under his direction and supervision.

11. Cooperation with the States

Under Section 8 of the Act of June 14, 1930[27] the Secretary of the Treasury is directed to cooperate with the several States

[27] 21 U. S. C. 198.

in the suppression of the abuse of narcotic drugs in their respective jurisdictions and to this end he is authorized (1) to cooperate in the drafting of such legislation as may be needed and (2) to arrange for the exchange of information concerning the use and abuse of narcotic drugs in said States and for cooperation in the institution and prosecution of cases in the courts of the United States and before licensing boards and courts of the several States. The Secretary of the Treasury has authorized the Commissioner of Narcotics to furnish to State Licensing Boards such information in the possession of the Bureau of Narcotics as the Commissioner may deem appropriate to the enforcement of any State law or regulation or municipal ordinance relating to the granting, withholding, suspension, or revocation of State licenses or permits.[28] The Commissioner is also authorized to direct the attendance, as a witness, in hearings held by such boards or agencies, of any officer, agent or employee of the Bureau of Narcotics, and the production of pertinent records or copies thereof. Pursuant to this authority, the Commissioner reports to the several State Medical Licensing Boards a statement of the facts in the cases of practitioners convicted of offenses against the narcotic laws or who are shown to be narcotic drug addicts. If the State Licensing Board decides to institute action under its Medical Practice Act looking toward suspension or revocation of the practitioner's license and desires the attendance of the Federal investigating officer as a witness at the hearing, the Commissioner arranges the attendance of such officer at the hearing and the production of such pertinent records as may be necessary.

[28] 21 C. F. R. 201.8-201.12.

12. Conclusion

Dr. Morris Fishbein in his introduction[29] to a series of articles printed in the Journal of the American Medical Association in 1931 on the Indispensable Use of Narcotic Drugs, has presented to the medical profession some excellent suggestions dealing with the general professional use of narcotic drugs. If all physicians would accept and conscientiously follow these suggestions, which are quoted below, irregularities in prescribing and dispensing narcotic drugs by physicians would be reduced to a minimum.

> The problem of narcotic addiction merits the attention of physicians for many reasons. The control by statute of the prescribing of alcohol, and the definite limitations of the amount prescribed, indicates that the medical profession must do everything possible to minimize the prescribing of narcotics in order to make unnecessary further restrictive measures. Physicians should give more serious consideration to the materia medica, pharmacology and therapeutics of narcotics.
>
> Physicians may, by the exercise of more thought in practicing, do much to avoid censure in relation to narcotic addiction. They may substitute, whenever possible, non-habit-forming drugs in the place of morphine or other opium alkaloids. When narcotics are indispensable, however, as shown in this series of articles, no more should be administered than is necessary to achieve the desired end. Patients requiring daily administration should be seen often by the doctor and the amount of drugs ordered or supplied should not exceed that required by the patient until seen again. Independence of administration on the part of nurses should be strictly limited to prescription and any change in treatment should be in writing.

[29] Various authors; The Indispensable Use of Narcotic Drugs, 96:856, 1931.

MENTAL ACCOUNTABILITY UNDER MILITARY LAW*

COLONEL ABNER E. LIPSCOMB, J. A. G. D.[1]

In a recent court-martial case a psychiatrist testified that an accused, who had served successfully as an officer and who appeared to be altogether rational, was,

> No more able to adhere to the right as we defined it here and avoid expressing his symptoms than a man with acute appendicitis is able to alter the course of his acute appendicitis by an act of will.

He was then permitted to testify that the accused was legally sane but medically insane and to explain his apparent contradiction by stating that ". . . . our concepts of sanity are derived from English law of one hundred years ago. . . . ." Attached to the record was a plea for clemency in which the trial judge advocate and his assistant stated that they were of the opinion that if this case were tried three to five years in the future the accused would be ". . . . acquitted by reason of the changing concept of sanity."

At about the same time the United States Court of Appeals for the District of Columbia rendered an opinion involving the law of insanity in the case of *Holloway* v. *United States*. (Decided Feb. 26, 1945.) This opinion is interesting, not because of its disposition of the case, but because of its analysis of psychiatry and because of certain of its statements concerning mental accountability, among which were the following:

> Legal tests of criminal insanity are not and cannot be the result of scientific analysis or objective judgment. There is no objective standard by which such a judgment of an admittedly abnormal offender can be measured. They must be based on the instinctive sense of justice of ordinary men.
>
> The tendency of psychiatry is to regard what ordinary men call reasoning as a rationalization of behavior rather than the real cause of behavior. From this point of view psychiatrists probe behind what ordinary men call the "reasoning" of an abnormal personality. This tends to restrict the area of moral judgment to an extent that offends our traditional idea that an offender who can talk and think in rational terms is morally responsible for what he does.
>
> . . . . to the psychiatrist mental cases are a series of imperceptible gradations from the mild psychopath to the extreme psychotic, whereas criminal law allows for no gradations. It requires a final decisive moral judgment of the culpability of the accused. For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane.
>
> A complete reconciliation between the medical tests of insanity and the moral tests of criminal responsibility is impossible. . . . . To command respect criminal law must not offend against the common belief that men who talk rationally are in most cases morally responsible for what they do.

The above opinions raise questions which, for the purpose of the present discussion, may be summarized as follows:

1. What is the military justice concept of mental accountability? Does it hold the so-called "medically insane" to criminal responsibility?
2. Is mental accountability to be determined on the basis of a scientific analysis or "on the instinctive sense of justice of ordinary men"?
3. What is the proper function of the psychiatrist in an insanity case?
4. Upon whom does the burden of proof lie, and in the final analysis how and by whom must the issue of mental accountability be determined?

These and other questions which have frequently arisen in courts-martial cases have suggested the following brief review of the history of the law of insanity and an appraisal of the standard of mental accountability evolved by military justice.

Legal Tests for Insanity Prior to 1843

During the early history of the common law the madman charged with murder was not acquitted by reason of insanity but a special verdict might be rendered reciting that the accused was insane and thereafter he might be pardoned by the king. There was the same need of a royal pardon for homicide by misadventure or in self defense.[2] During this early period only a few of the psychoses were known and recognized; con-

* This article, in somewhat altered form, was published in The Judge Advocate Journal, Vol. II, No. 2.

[1] A. B., LL. B., Baylor University 1925; LL. B., University of Texas, 1934; S. J. D., Harvard, 1938. Professor of Law, School of Law, Western Reserve University. Former Chairman, Board of Review Number 3, Office of The Judge Advocate General.

[2] Pollock & Maitland's History of English Law, Vol. 2, p. 478.

sequently we find that insanity was generally regarded as a visitation from the Almighty, and many thought that the insane were under demoniacal influence. In fact, it was not until the late 18th and early 19th centuries that the medical profession began to study insanity with any degree of thoroughness.[3] During this early period various legal tests were promulgated as legal guides in determining criminal accountability. Among these tests were "the wild beast" test which relieved the criminally insane from accountability only if he were "totally deprived of his understanding and memory, and [did] not know what he [was] doing no more than an infant, than a brute, or a wild beast";[4] the "count twenty pence" test;[5] and the test of "disability of distinguishing between good and evil."[6] Clearly these harsh tests exempted only the most obvious lunatics and imbeciles. The gradual amelioration, however, of criminal law and the development of the science of medicine led to a more humane approach to the problems of criminal justice and resulted in 1843 in the famous opinion in the McNaghten case.

The McNaghten Case—The Right and Wrong Test

This landmark in the history of the law of insanity arose as the result of the general dissatisfaction over the acquittal of Daniel McNaghten upon the ground of insanity. McNaghten was tried for the murder of Edward Drummond, Secretary to Sir Robert Peel. The evidence in the case showed that McNaghten had mistaken Drummond for Peel. It further showed that McNaghten had been laboring under the insane delusion that Sir Robert Peel had injured him. After McNaghten had been acquitted, the House of Lords, under its power to require opinions of its judges on abstract questions of law, propounded five questions to the Court of the House of Lords. To the five questions the court answered, as follows:

1. Insane Delusion

As to "those persons who labor under such partial delusions only, and are not in other respects insane, we are of opinion that, notwithstanding the party accused did the act complained of with a view, under the influence of insane delusion, of redressing or revenging some supposed grievance or injury, or of producing some public benefit, he is nevertheless punishable according to the nature of the crime committed, if he knew at the time of commiting such crime that he was acting contrary to law; by which expression we understand your Lordships to mean the law of the land."

2. Presumption of Sanity

. . . . the jurors ought to be told in all cases that every man is to be presumed to be sane, and to possess a sufficient degree of reason to be responsible for his crimes, until the contrary be proved to their satisfaction. . . . .

3. Right and Wrong Test

. . . . to establish a defence on the ground of insanity, it must be clearly proved that, at the time of the committing of the act, the party accused was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong.

4. Insane Delusion (Continued)

As to a person laboring ". . . . under such partial delusion only, and is not in other respects insane, we think he must be considered in the same situation as to responsibility as if the facts with respect to which the delusion exists were real. For example, if, under the influence of his delusion, he supposes another man to be in the act of attempting to take away his life, and he kills that man, as he supposes, in self-defence, he would be exempt from punishment. If his delusion was that the deceased had inflicted a serious injury to his character and fortune, and he killed him in revenge for such supposed injury, he would be liable to punishment."

5. Medical Testimony—The Hypothetical Question

In reply to the question "Can a medical man conversant with the disease of insanity, who never saw the prisoner previously to the trial, but who was present during the whole trial and the examination of all the witnesses, be asked his opinion as to the state of the prisoner's mind at the time of the commission of the alleged crime? or his opinion whether the prisoner was conscious at the time of doing the act that he was acting contrary to law, or whether he was laboring under any and what delusion at the time?" the judges answered that ". . . . we think the medical man, under the circumstances supposed, cannot in strictness be asked his opinion in the terms above stated, because each of those questions involves the determination of the truth of the facts deposed to, which it is for the jury to decide, and the questions are not mere questions upon a

[3] The History of Insanity as a Defense to Crime in English Criminal Law, 12 Cal. L. Rev. 105.
[4] *Rex* v. *Arnold*, 16 How St. Tr. 695, 765.
[5] 1 Hale, P. C. 29.
[6] Hawkins' Plea to the Crown, Vol. 1, p. 1.

matter of science, in which case such evidence is admissible. But where the facts are admitted or not disputed, and the question becomes substantially one of science only, it may be convenient to allow the questions to be put in that general form, though the same cannot be insisted on as a matter of right."

Within the same year "the right and wrong test," as set forth in answer number 3, was judicially employed.[7] In that case the court held that a feeble-minded defendant whom the jury had found to know the difference between right and wrong was legally accountable for murder. Similarly, the various jurisdictions within the United States followed the lead of the McNaghten opinion by adopting some form of the "right and wrong test." In fact, since 1843 no English or American court has demanded a more exacting standard of proof of insanity than is required by the McNaghten opinion.

Irresistible Impulse Test

The McNaghten opinion was, however, soon subject to much criticism. Learned men of the sciences contended that the right and wrong test as the sole determining test of mental accountability was inadequate and untrustworthy; that it failed to take into account the obvious facts of nature; and that it failed to comprehend the complex pathology of insanity. It was also asserted that experience had shown that ". . . . in all lunatics, and in most degraded idiots, whenever manifestations of any mental action can be adduced, a feeling of right and wrong may be proved to exist." [8] To meet such criticisms and to supplement the inadequacy of the right and wrong test, the theory of "irresistible impulse" was advanced. Under this theory a person may, because of disease, defect or derangement of the mind, be incapable of restraining himself from some particular act although knowing it to be wrong. As early as 1878 Sir James Stevens, in drafting a criminal code for England, sought, but without success, to supplement the right and wrong test by introducing the irresistible impulse test into the statutory law of that jurisdiction.[9] The reluctance of the courts and of the legislative bodies both in England and in this country to accept the more difficult concept involved in the irresistible impulse test has at times been marked by reactionary intolerance. One state went so far as to abolish insanity completely as a defense but its legislative enactment was declared unconstitutional.[10] One court, dogmatically refusing to recognize the existence of an irresistible impulse, charged the jury as follows:

> The law says to men who say they are afflicted with irresistible impulse, "if you cannot resist an impulse in any other way, we will hang a rope in front of your eyes and perhaps that will help." [11]

Other judges have rendered decisions based upon their personal lack of scientific knowledge. Thus one justice states,

> For myself I cannot see how a person who rationally comprehends the nature and quality of an act, knows that it is wrong and criminal, can act through irresistible innocent impulse.[12]

On the other hand, other jurists have revealed praiseworthy humility before the problems of a complicated science. Such humility is splendidly exemplified in the case of *Parsons* v. *State* [13] in which Mr. Justice Somerville stated:

> It will not do for the courts to dogmatically deny the possible existence of such a disease, or its pathological and psychical effects, because this is a matter of evidence, not of law, or judicial cognizance. Its existence, and effect on the mind and conduct of the patient, is a question of fact to be proved, just as much as the possible existence of cholera or yellow fever formerly was before these diseases became the subjects of common knowledge, or the effects of delirium from fever, or intoxication from opium and alcoholic stimulants would be. The courts could, with just as much propriety, years ago, have denied the existence of the Copernican system of the universe, ...

The controversy in this field of the law has been extensive. In 1910 Colonel John H. Wigmore, then president of the American Institute of Criminal Law and Criminology, appointed a committee composed of four physicians and five lawyers to resolve the difficult problem of determining the relation

[7] *Rex* v. *Higginson*, 1 Car. & K. 129.

[8] Bucknell on Criminal Lunacy, p. 59.

[9] History of Insanity in Criminal Law, 12 Cal. L. Rev. 104, 119.

[10] *State* v. *Strasburg*, 60 Wash. 106, 110 Pac. 1020.

[11] Riddell, J., in charging the jury in *Rex v. Cheighton*, 1908, 14 Can. Crim. Cas. 349.

[12] *State* v. *Harrison*, 1892, 36 W. Va. 729, 15 S. E. 982, 18 L. R. A. 224.

[13] 1886, 81 Ala. 577, 60 A. Rep. 193.

of insanity to criminal responsibility. In 1916 this committee, which had been in continuous existence since its appointment, brought in a unanimous resolution recommending a bill on criminal responsibility, as follows:

When Mental Disease a Defense. No person shall hereafter be convicted of any criminal charge when at the time of the act or omission alleged against him he was suffering from mental disease and by reason of such mental disease he did not have the particular state of mind that must accompany such act or omission in order to constitute the crime charged.[14]

The code of France provides that "There can be no crime, or offense if the accused was in a state of madness at the time of the act." Justice Somerville in *Parsons* v. *State* states,

For some time the French tribunals were inclined to interpret this law in such a manner as to follow in substance the law of England. But that construction has been abandoned, and the modern view of the medical profession is now adopted in that country.

Similarly the criminal code of Germany reputedly contains a provision, which is said to have been the formulated result of a very able discussion both by the physicians and lawyers of that country. The German code provides

There is no criminal act when the actor at the time of the offense is in a state of unconsciousness or morbid disturbance of the mind, through which the free determination of his will is excluded.[15]

Although the English courts have persistently adhered to the right and wrong test of the McNaghten opinion to the exclusion of the so-called irresistible impulse test, the various jurisdictions within the United States have been divided.[16] Miller on Criminal Law states,

Some judges have used the term (insanity) in contradistinction to the "right and wrong" test; others use it as illustrative of that test; others insist that the "right and wrong" test properly interpreted includes the element of irresistible impulse; and still others deny that such a form of insanity exists.

A majority of American jurisdictions, however, seem to reject the irresistible impulse tests.[17] Indeed, the New York Penal Code recognizes the defense of insanity only when the defendant "was laboring under such a defect of reason as either (1) not to know the nature and quality of the act he was doing, or (2) not to know whether the act was wrong." [18]

Meaning of Right and Wrong in Testing Sanity

Mr. Justice Cardozo, in discussing the meaning of right and wrong as those words are employed in testing sanity, has stated:

As propounded in these cases, it meant a capacity to distinguish right from wrong, not with reference to the particular act, but generally or in the abstract. Sometimes it was spoken of as a capacity to distinguish between "good and evil." . . . . Wrong was conceived of as synonymous not with legal but rather with moral wrong. Lord Mansfield told the jury in Bellingham's Case: "It must be proved beyond all doubt that at the time he committed the atrocious act, he did not consider that murder was a crime against the laws of God and nature." That became for many years the classic definition. It was followed by Lord Lyndhurst in *Reg.* v. *Oxford* (9 C. and P. 533). Its phraseology, as we shall see, has survived with little variation in charges and opinions of our own day.[19]

As has been pointed out, however, by Justice Bartlett in *People* v. *Carlin*,[20] "it is not enough that the accused has views of right and wrong that are at variance with those that find expression in the law. The variance must have its origin in some disease of the mind." [21]

If we accept moral responsibility as the basic test of legal accountability ". . . . both the right and wrong test and the irresistible impulse test ought to be recognized. If free will and self-restraint be destroyed by mental disease, knowledge of right and wrong is entirely useless. Will is as necessary an element of criminal intent as are reason and judgment." [22] As Steven said, "Legal

[14] Insanity and Criminal Responsibility, 30 Harvard L. Rev., 535, 536.

[15] 14 Encyc. Brit., 9th Ed., p. 112.

[16] Wharton's Criminal Law, 12th Ed., Sec. 408.

[17] See Wharton's Criminal Law, 12th Ed., sec. 408, and cases therein cited.

[18] Penal Code, N. Y., 21, see *People* v. *Taylor*, 138 N. Y. 398, 34 N. E. 275.

[19] *People* v. *Schmidt* 1915, 216 N. Y. 324.

[20] 194 N. Y., 448, 87 N. E. 805.

[21] See *Hotema* v. *United States*, 186 U. S. 413, 22 S. Ct. 895, 46 L. Ed. 1225.

[22] Criminal Responsibility of the Insane and Feeble-Minded, 9 Journal of Criminal Law and Criminology, p. 497.

Punishment connotes as far as possible moral infamy."

The Irresistible Impulse Test Distinguished from Moral and Emotional Insanity

The theory of the irresistible impulse test must be carefully distinguished from the so-called moral or emotional insanity which some courts have described as a perverted condition of a person's moral nature. It is recognized that a person may become so morally degenerate either from bad associations and surroundings or from continued unrestrained indulgence in vice that his conscience will no longer restrain him. Such moral degeneration does not excuse a person from criminal responsibility. Neither does so-called emotional insanity or temporary frenzy or passion arising from excitement or anger which is not the product of a mental disease. There is danger of being misled by the decisions dealing with these subjects as the terms have sometimes been carelessly used. Each case must be examined to see whether the irresistible impulse under consideration arose from a mental disease or merely from a moral depravity or callous nature.[23]

Mental Accountability in the Federal Courts

The early United States District Court decisions seem to follow the McNaghten opinion and to restrict mental accountability to the so-called right and wrong test.[24] As far back, however, as 1873 the Supreme Court of the United States in *Mutual Life Insurance Company* v. *Terry*,[25] gave its blessing to a modification of the old rule. Mr. Justice Hunt stated:

> We hold the rule on the question before us to be this. . . . . If the death is caused by the voluntary act of the assured, he knowing and intending that his death shall be the result of his act, but when his reasoning faculties are so far impaired that he is not able to understand the moral character, the general nature, consequences and effect of the act he is about to commit, *or when he is compelled thereto by an insane impulse, which he has not the power to resist*, such death is not within the contemplation of the parties to the contract, and the insurer is liable. (Italics supplied.)

This attitude toward the "irresistible impulse" theory has been reaffirmed and clarified in various decisions,[26] all of which are cited and discussed in *Smith v. United States*,[27] which is probably the leading Federal opinion on the subject. The opinion states in part, as follows:

> Laying aside the objectionable negative style of the charge, we think it erroneous in point of law, in that it ignores the modern well-established doctrine of "irresistible impulse." The English rule, followed by the American courts in their early history, and still adhered to in some of the states, was that the degree of insanity which one must possess at the time of the commission of the crime in order to exempt him from punishment must be such as to totally deprive him of understanding and memory. This harsh rule is no longer followed by the federal courts or by most of the state courts. The modern doctrine is that the degree of insanity which will relieve the accused of the consequences of a criminal act must be such as to create in his mind an uncontrollable impulse to commit the offense charged. This impulse must be such as to override the reason and judgment and obliterate the sense of right and wrong to the extent that the accused is deprived of the power to choose between right and wrong. The mere ability to distinguish right from wrong is no longer the correct test either in civil or criminal cases, where the defense of insanity is interposed. The accepted rule in this day and age, with the great advancement in medical science as an enlightening influence on this subject is that the accused must be capable, not only of distinguishing between right and wrong, but that he was not impelled to do the act by an irresistible impulse, which means it will justify a verdict of acquittal that his reasoning powers were so far dethroned by his diseased mental condition as to deprive him of the will power to resist the insane impulse to perpetrate the deed, though knowing it be wrong.

Subsequent to the above opinion the entire personnel of the Court of Appeals for the District of Columbia was changed. In its recent opinion in *Holloway* v. *United States*, cited at the beginning of this article, the pres-

[23] Clark & Marshall Crimes, 4th Ed., Sec. 87; Miller on Criminal Law, p. 130; 22 BR 1, 52.

[24] See *United States* v. *Holmes*, 1858, Federal Case No. 15382; Cinteau's case, 1882, 10 Fed. 161; *United States* v. *Faulkner*, 1888, 35 Fed. 730; and *United States* v. *Young*, 1885, 25 Fed. 710.

[25] 15 Wallace 580.

[26] *Insurance Company* v. *Rodel*, 95 U. S. 232, 24 L. Ed. 433; *Manhattan Life Insurance Company* v. *Broughton*, 109 United States 121, 27 L. Ed. 878; *Davis* v. *United States*, 165 U. S. 375; 41 L. Ed. 750; see also *United States* v. *Chisholm*, 153 Fed. 808, C. C. S. D. Ala. 1907.

[27] 36 F. (2) 548, App. D. C. 1929.

ent members, in considering a case involving the issue of insanity and without referring to the Smith decision, stated, "The ordinary test of criminal responsibility is whether the defendant could tell right from wrong." They then added, "A slightly broader test is where his reason has ceased to have dominion over his mind to such an extent that his will was controlled, not by rational thought, but by mental disease." In discussing the application of the tests of mental accountability they stated:

> For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane. A complete reconciliation between the medical test of insanity and the moral test of criminal responsibility is impossible. . . . . To command respect criminal law must not offend against the common belief that men who talk rationally are in most cases morally responsible for what they do.

The reference to the irresistible impulse test as a slightly broader test than that involved in the right and wrong test is a distinct understatement. Only one who suffers from an extreme form of psychosis is unable to distinguish right from wrong. Such a person is clearly insane and incompetent for all purposes. On the other hand, the irresistible impulse theory recognizes the scientific truth that the capacity to feel remorse and to distinguish right from wrong does not necessarily imply the mental ability to control conduct. The introduction of this theory was a distinct compromise with the law's traditional concept as expressed in the Holloway opinion that "An offender is wholly sane or wholly insane." Contrary also to one of the statements quoted, the irresistible impulse standard of accountability acknowledges that there are twilight zones between abnormality and insanity as it is usually understood in which a man may walk and talk rationally and yet, because of a diseased mind, be so incapable of controlling his conduct as not to possess freedom of action and not to be, therefore, legally responsible for his acts. Since medical science recognizes that an insane impulse may be truly irresistible, and since criminal justice punishes only for acts voluntarily and freely committed, the mandates of simple justice require that full effect be given to this basic principle.

Standards of Mental Accountability Under Military Law

The present Manual for Courts-Martial (1928) has provided military justice with a standard of mental accountability which is free from dogma, which is independent of any conventional legal or medical definition of insanity, and which is designed to establish mental accountability upon the basis of moral justice. The Manual states,

> . . . . A person is not mentally responsible for an offense unless he was at the time so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the right.[28]

The Manual for Courts-Martial, 1921, on this point provides that in determining the issue of mental responsibility for a crime, the courts-martial having such responsibility should ballot upon the following question:

> (2) Was the accused at the time of the commission of the alleged offense so far free from mental defects, mental disease, or mental derangement as to be able, concerning the particular acts charged, both (1) to distinguish right from wrong and (2) to adhere to the right?
>
> This question will be balloted upon as to each specification, and if answered negatively or a tie vote the court will acquit the accused as to such specification.[29]

Similarly, Winthrop states:

> To constitute a defense on the ground of insanity, it may be made to appear, ... on the other hand, that, though aware of the nature and consequence of his act, as well as of its wrongfulness or its illegality, he was prompted by such an uncontrollable impulse as not to be a free agent.[30]

A rule which was apparently even broader and more liberal than that contained in the foregoing quotations was set forth in paragraph 219 of the Manual for Courts-Martial, 1917, which asserted that the question to be determined in any case involving mental accountability was "whether the accused at the time of the wrongful act had the necessary criminal mind to commit the wrongful act charged."

It seems clear that the standard for mental accountability as set forth in the Manual

[28] M. C. M., 1928, par. 78.
[29] M. C. M., 1921, par. 219g.
[30] Winthrop's Military Law and Precedents, Reprint 1920, p. 294.

combines both the concept of the right and wrong test and the concept of the irresistible impulse test and is sufficiently inclusive to encompass the problems involving insane delusion as presented in the McNaghten opinion. Upon the military justice test the ultimate triers of the facts are not concerned with complicated definitions or with conventional forms of so-called insanity but rather with the following all-important questions:

(a) Was the accused at the time of the alleged offenses "so far free from mental defect, disease or derangement as to be able concerning the particular acts charged" to distinguish right from wrong? [31]

(b) Was the accused at the time of the alleged offenses "so far free from mental defect, disease and derangement as to be able concerning the particular acts charged . . . . to adhere to the right?" [32]

(c) Was the accused at the time of his trial sufficiently sane "intelligently to conduct or cooperate in his defense?" [33]

If either of the first two questions is answered in the negative the accused should be found not guilty by reason of mental disease, defect or derangement. If the third question is answered in the negative he should not be tried. The above principle has been consistently recognized in military law.[34] For example, in 13 BR 389, *Riesenman,* the accused was shown to be an intelligent individual, able to conduct his own defense and to recognize right from wrong as to the particular acts charged. Since, however, the evidence showed that he was suffering from mental disease, defect or derangement which rendered him unable, concerning the particular acts charged, to adhere to the right, the findings of guilty were disapproved. In a much older decision, The Judge Advocate General summarized this controlling principle, as follows:

> Men, under the influence of disease, may know the right, and yet be powerless to resist wrong. The well-known exhibition of cunning by persons admitted to be insane, in the perpetration of an illegal act, would seem to indicate comprehension of its evil nature and legal consequence, and yet the power of self-control being lost from disease, there can be no legal responsibility.[35]

The Burden of Proof

Although there are differences of opinion in the state courts concerning the party who bears the burden of proof on the issue of mental accountability, the practice in military law is well settled. The Manual for Courts-Martial directs:

> Where a reasonable doubt exists as to the mental responsibility of an accused for an offense charged, the accused cannot legally be convicted of that offense. . . . .[36]

This provision, which is similar to the provision of the 1921 Manual, places the burden of ultimate persuasion on the issue of mental responsibility upon the prosecution and recognizes the fundamental principle that all men are deemed innocent until proved guilty beyond a reasonable doubt.[37] On this point the United States Supreme Court has made the following authoritative pronouncement:

> . . . . Strictly speaking, the burden of proof, as those words are understood in criminal law, is never upon the accused to establish his innocence or to disprove the facts necessary to establish the crime for which he is indicted. It is on the prosecution from the beginning to the end of the trial and applies to every element necessary to constitute the crime. . . . .
>
> * * * *
>
> If insanity is relied on and evidence given tending to establish that unfortunate condition of mind, and a reasonable well-founded doubt is thereby raised of the sanity of the accused, every principle of justice and humanity demands that the accused shall have the benefit of the doubt.[38]

It is clear, therefore, that evidence which raises a reasonable doubt as to an accused's mental responsibility overcomes the presumption of his sanity and injects the issue of his mental accountability into the court-martial trial. The burden then rests with the prosecution to prove, as an instance to the ultimate issue of guilt, that the accused was "so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the

[31] Fifth sub-paragraph, paragraph 78*a*, p. 63, M. C. M., 1928.

[32] Fifth sub-paragraph of paragraph 78*a*, p. 63, M. C. M., 1928.

[33] First sub-paragraph of paragraph 63, M. C. M., 1928.

[34] See 1 BR 39, 46; 8 BR 57; 11 BR 281, 297; 13 BR 389; 14 BR 339; 15 BR 281; 18 BR 301, 312; 23 BR 115.

[35] CM 116694, *James.*

[36] M. C. M., 1928, par. 78.

[37] See M. C. M., 1921, par. 219.

[38] *Davis* v. *United States,* 160 U. S. 469.

right." If the prosecution fail to establish such proof beyond a reasonable doubt, the court should acquit the accused.

Probative Force of a Report by a Board of Medical Officers—The Expert's Testimony

The primary function of a board of medical officers appointed pursuant to Army Regulation 600-500 is to examine into the mental condition of a designated person for the purpose of rendering an opinion concerning his sanity or mental accountability to the authority directing the examination. Since the personnel of the board act out of court, and since they have not been subjected to cross-examination, they should be called as witnesses and given an opportunity to explain their conclusions. The necessity of this procedure was recognized in the Manual for Courts-Martial, 1917, wherein it was stated:

> The medical report as a whole will be admissible in evidence, and when admitted the court will have called as a witness for the court at least one of the members of the board to be thoroughly examined, as if on cross-examination, by counsel for the accused, the judge advocate or the court, as to any feature of the report, *and on request of the accused the remaining members of the board shall be called for cross-examination.* (Italics supplied.)

The testimony of an alienist may be based upon the following:

(a) Personal acquaintance with the accused.

(b) Personal examination and observation of the accused.

(c) Hypothetical questions which permit medical officers to express opinions upon facts assumed to be true which in reality may be in dispute. By use of the hypothetical question the court is given the benefit of the expert's opinion for use by the court if the court resolves the factual issue consistent with the assumed facts in the hypothetical question.

Result of a Finding of Not Guilty by Reason of Mental Defect, Disease or Derangement

An acquittal by reason of mental defect, disease or derangement does not adjudge the accused to be insane but only indicates that a reasonable doubt exists as to his mental accountability for the particular offense charged. Accordingly, before the accused may legally be incarcerated in an institution for the insane, he must be examined by a special board of medical officers in accord with Army Regulations in order to determine whether or not his mental disorder is of a type requiring such incarceration. If the court erroneously applies the test of the Manual for determining mental accountability and wrongfully finds the accused guilty and if the Board of Review and The Judge Advocate General hold the record of trial legally insufficient to sustain such findings of guilty, the reviewing or confirming authority may order a rehearing or such other action as may be appropriate.[39]

Proving Mental Accountability—The Function of the Psychiatrist

The ultimate problem of determining the mental accountability of an accused is a factual one to be determined by the court in the light of the legal standard fixed by military law. This standard states the law's concept of moral justice by directing that an accused shall not be convicted unless he is "so far free from mental defect, disease, or derangement as to be able concerning the particular acts charged both to distinguish right from wrong and to adhere to the right." Since the standard measures out the law's concept of moral justice, the court's function in applying it does not involve primarily moral judgment but the fact finding problem of determining from the evidence before it the existence or nonexistence of a disabling mental disease, defect or derangement.

Mental capacity like other human qualities or conditions may and, in most cases must, be discovered by circumstantial evidence. Because of this recognized truth, great latitude is allowed by the courts in the reception of evidence.[40] In this connection Wigmore states:

> The first and fundamental rule, then, will be that any and all conduct of the person is admissible in evidence. There is no restriction as to the kind of conduct. There can be none; for if a specific act

[39] A. W. 50½, par. 4.

[40] Wharton's Criminal Evidence, 11th Ed., Sec. 318.

does not indicate insanity it may indicate sanity. It will certainly throw light one way or the other upon the issue.[41]

It is also relevant and proper to show pre-existing external circumstances which may have tended to produce a specific mental condition or the prior or subsequent existence of a condition from which a particular mental condition may be inferred.[42] For the same reason Wigmore stated:

> It is almost universally agreed that a lay-witness is qualified to testify to insanity; and it seems to be universally accepted that, in whatever form the issue of insanity may be presented, the jury may take into consideration the behavior of the person as observed by them. (Sec. 1160.)

Although it appears that insanity is not necessarily inherited, psychiatrists state that there is a definite tendency for this malady to be transmitted to descendants. It has also been shown that insanity may appear in one generation and not in the following but may re-appear in the third generation. It follows, therefore, that the insanity both of an ancestor, as well as that of a collateral relative, may indicate an anterior ancestral tendency to the disease which may appear in other collateral branches of the family. Although some courts have imposed limitations on evidence showing this inherited tendency, courts-martial have been liberal in the admission of such evidence.

The proper function of the psychiatrist as an expert witness on mental conditions should be well understood. Although his testimony is of vital importance to a proper understanding of certain forms of mental conditions, there is no rule of evidence which requires his testimony in a court-martial case and no rule of preference which accords to it greater weight than that accorded to other relevant testimony.[43] In the Army, however, as in other jurisdictions where modern procedure is followed, an accused who has raised the issue of his mental accountability is placed under observation by physicians with the result that their expert testimony becomes a practical requirement in his trial.[44] The probative force of the testimony of the psychiatrists is dependent, as is the probative force of the testimony of all witnesses, first, upon the witnesses' individual credibility as evaluated by the court; and secondly, upon the logic and clarity of his scientific analysis of the problem before the court. His primary function is to enlighten the court on the pathology and symptoms of the particular mental disorder with which the accused may be afflicted and to explain the probable effect of such a mental condition upon the accused's ability to distinguish between right and wrong and his ability to control his conduct. The psychiatrist just as the court which he serves should endeavor not to inject his individual concept of morality and justice into the case. He should acquaint himself with the military standard of mental accountability and remember that when he is testifying before a court-martial, or advising a reviewing authority, he is not functioning under the law of his particular state or applying a test of sanity as it existed under English law one hundred years ago, but that he is seeking to help the court or the reviewing authority to make a scientific and truthful answer to the questions involved in the military justice standard of mental accountability.

Conclusions

In conclusion and to answer more particularly the questions listed at the beginning of this article, it should be observed that military justice in determining the issue of mental accountability is not controlled by any conventional, legal or medical definition of sanity and that certainly it is not restricted to the concepts of the English law of one hundred years ago. On the contrary, military justice has evolved a unique standard of mental accountability which includes not only the concepts involved in the traditional so-called right and wrong test but also the more liberal and humane concept of moral justice involved in the so-called irresistible impulse test. In incorporating this latter concept into its standard of mental accountability, military justice has recognized the scientific truth that the capacity to feel remorse and to distinguish between right and wrong does not necessarily imply power to control conduct. It has thus compromised the law's

[41] Wigmore on Evidence, 3rd Ed., Sec. 228.
[42] Wigmore, *supra*, Sec. 227.
[43] Wigmore, *supra*, Sec. 2090.
[44] Wigmore, *supra*, 2090, c.

traditional arbitrary concept that all persons within certain categories possess absolute freedom of will and that all persons within other categories possess none. It has repudiated the conventional legal position as stated in *Holloway* v. *United States, supra*, that, "For the purposes of conviction there is no twilight zone between abnormality and insanity. An offender is wholly sane or wholly insane." In other words, the military justice standard of mental accountability represents a compromise between law and medical science, a compromise between the concept of sanity and justice of the ordinary man and the concept of justice and sanity of the modern psychiatrist. It admits that a man may walk and talk rationally and yet not be medically, morally or legally responsible for his conduct.

Athough it has not been entirely satisfactory to the lawyer or to the psychiatrist, it possesses distinct merit. It is based upon the fundamental principle of criminal justice that a crime has not been committed unless the accused, at the time of the particular offense complained of, possessed the necessary mental intent or attitude. Obviously, without a knowledge of the rightness or wrongness of an act, an accused could not have a criminal mind. Likewise, if the accused, because of mental illness, is deprived of the power of choice or of volition he does not possess the mental attitude essential to criminal responsibility. Moreover, the military justice standard is not a test of sanity or insanity as those words are generally understood. It employs neither word and it does not require a determination as to the existence of either condition. Since the standard is free from the restraints of dogma and from inflexible legal and medical definitions, it should remain useful despite changing views as to the nature and scope of mental diseases. Regardless, however, of its merits the problem of its just application is a difficult one and one which calls for intellectual humility and painstaking effort on the part of all concerned.

MENTAL ACCOUNTABILITY UNDER MILITARY LAW IN CANADA[1]

F. C. AULD, K.C., M.A., B.C.L. (OXON.)
Professor, School of Law, University of Toronto

As regards military law in Canada, a primary fact must be kept in mind: a person subject to military law when in His Majesty's dominions may be tried by any competent civil court for any offence for which he would be triable if he were not subject to military law. While, for convenience, military courts are given power to deal with most civil offences, they cannot try an accused person for treason, murder, manslaughter, treason-felony or rape, unless such person at the time he committed the offence was on active service or unless the place where the offence was committed is more than one hundred miles in a straight line from any place in which the offender can be tried for such offence by a competent civil court. In practice, military courts are reluctant to try cases of the greater felonies (especially murder, manslaughter and rape) if the matter can be turned over to a civil court to deal with.

Now, it is precisely in respect of the greater felonies, involving penalties of death or life imprisonment, that the defence of insanity is raised. No counsel is likely to put in a plea of insanity to a lesser charge, involving at most imprisonment for a term of years—for acquittal on the ground of insanity normally involves incarceration in an institution for the care of the criminally insane, and that is virtually equivalent to a life sentence.

It follows that military courts have had comparatively little to do with the plea of out-and-out insanity, though it often happens that evidence of weak-mindedness is adduced before such courts in support of an argument for mitigation of the penalties for lesser offences.

Military courts recently, however, have exercised jurisdiction to try charges of treason, mutiny and desertion; and, in respect of such matters, considerations of mental accountability become of great interest and importance.

The principles by which a military court will be governed in deciding questions of liability where the defence of insanity has been raised are set forth in the Manual of Military Law issued by command of the Army Council in England, and made applicable to Canadian troops under the provisions of the Militia Act, R.S.C. 1927, C. 132. These principles differ in no way from those which are applied in the trial of offenders in civil courts in Canada.

The fundamental test is that which was established in *McNaghten's Case*. This test finds statutory formulation in S. 19 of the Canadian Criminal Code. "No person shall be convicted of an offence by reason of an act done or omitted by him when labouring under natural imbecility, or disease of the mind, to such an extent as to render him incapable of appreciating the nature and quality of the act or omission, and[2] of knowing that such an act or omission was wrong. A person labouring under specific delusions, but in other respects sane, shall not be acquitted on the ground of insanity . . . . unless the delusions caused him to believe in the existence of some state of things which, if it existed, would justify or excuse his act or omission." It is not a good defence that the accused, though he can distinguish between right and wrong, is so affected by disease that he is incapable of controlling his actions; and the courts have been astute to point out the difficulties of distinguishing between the *irresistible impulse* and the *unresisted impulse*.

The burden of proof of insanity at the time of the commission of the offence lies with the accused. Every person, that is, is presumed to be sane and to be responsible for his acts until the contrary is proved; and it must, therefore, be clearly proved by the defence that the accused is brought within the terms of the exceptions above quoted.

Although irresistible impulse is not ac-

[1] This brief statement was written on request to permit comparison of usage in the United States and Canada.

[2] For "and" read "or," Vide *R. v. Cracknell*, [1931] 4 D.L.R. 657, O.R. 634, 56 Can. Cr. Cas. 190.

cepted by military tribunals as a defence, yet in fact it will be considered in determining the quantum of punishment. If, as happens in Canadian law, the sentence of death on conviction of murder is a mandatory one, yet there is much room for executive clemency; and the confirming authority will generally be ready to hear any argument that may be advanced for a review and commutation of sentence. At the trial itself, careful inquiry will be made into the prisoner's medical history, and evidence of mental strain and similar relevant psychological factors, will be received in support of an argument that the accused was subjected to provocation, or laboured under a mistaken impression as to his right, for example, to defend himself against aggression.

The position of the medical expert, in military trials where the sanity of the accused comes into question, is not apparently any different from that which is found in the ordinary courts. A medical witness may be asked whether such and such appearances, proved by other witnesses, or from his own observation as a medical attendant prior to the trial, are in his judgment symptoms of insanity: but it appears that he may not be asked whether, from the other testimony given, the act with which the prisoner is charged is in his opinion an act of insanity. Medical men are confined to giving evidence of matters which come under their observation, and to saying what in their judgment would be the technical result of facts which are submitted to their consideration; they are not to reason upon hypothesis, or so give an opinion, and thus usurp the functions of the court. It may be suggested, however, that the average military tribunal is less disposed than an ordinary court to follow strictly the rules of evidence and that the opinion of a medical expert, if fairly and objectively offered, will usually not be taken amiss.

EMOTIONAL REACTIONS OF AMERICAN SOLDIERS TO AN UNFAMILIAR DISEASE[1]

MAJOR JEROME D. FRANK

Medical Corps, Army of the United States

I. Introduction

Since the beginning of the war American soldiers have been repeatedly exposed to unfamiliar diseases about which medical knowledge was incomplete at the time they were first contracted by our troops. In the Pacific theatre the first of these was malaria which was a major problem before atabrine therapy was standardized, to be followed by filariasis(2), scrub typhus, and schistosomiasis. Each of these diseases when first encountered by our troops was surrounded by an inevitable atmosphere of uncertainty. This tended to encourage emotional reactions in patients which themselves might produce symptoms or modify symptoms due to strictly organic causes. As a result, the duration and amount of invalidism caused by these illnesses was greater than might have been expected from their organic manifestations alone. As knowledge of each disease increased there was a decline in the amount of disability it produced, even without change in the methods of treatment. This improvement must be attributed to better attitudes on the part of both patients and physicians resulting from increased certainty as to the nature and treatment of the condition.

The problem of emotional reactions to an unfamiliar disease recently became acute at a general hospital in the Pacific area where a group of patients were being treated for schistosomiasis. Many patients showed a degree and persistence of invalidism so out of proportion to the objective findings that medical officers in charge of them requested a psychiatric evaluation of the situation. This study was an attempt to meet this request. It was undertaken at a time when uncertainties as to pathogenesis, organic manifestations, effectiveness of treatment, prognosis and disposition were at their height. Furthermore, the outbreak was of epidemic proportions, taxing hospital facilities to the utmost. The necessity for treating large groups of patients made it impossible to give each patient the individualized attention he would have received in more favorable circumstances. These conditions heightened certain emotional reactions which are probably present to some degree in all illnesses in which the patient is uncertain about his condition. Similarly, they brought into focus certain problems of therapy and aspects of the physician-patient relationship which under normal circumstances might tend to pass unobserved. It is believed that the findings of this study apply in some degree to patients' attitudes in all illness. In particular, it is hoped that it will supply clues as to how to cut down emotionally aggravated invalidsim, not only in patients with schistosomiasis, but in the unfamiliar diseases yet to be encountered as our troops occupy Japan.

Schistosomiasis is caused by a fluke which is transmitted by a water snail found in fresh water streams. The cercariæ enter the unbroken skin and develop into adult worms which lodge chiefly in the mesenteric veins. These worms lay eggs, some of which ulcerate through the wall of the intestinal tract and appear in the stools. It is believed that most of the early symptoms of schistosomiasis are caused by allergic reactions to the ova. Common initial symptoms are malaise, fever, urticaria, angioneurotic edema, upper abdominal pain, constipation, stiffness of the neck and cough. Occasionally more or less severe neurological manifestations are seen. There is usually an accompanying leucocytosis with eosinophilia. A positive diagnosis is established by finding mature ova in the stools.

Little is known of the remote effects of the disease in white men who have had only a brief exposure. In native populations, liver cirrhosis with ascites may eventually occur. However, they differ from our troops both

[1] From the Neuropsychiatric Service, 118 General Hospital.

in having repeated re-infestations and in the presence of acquired immunity.

At the time of this study it was difficult to evaluate the course of schistosomiasis after the acute stage had passed. Most patients had no physical findings after the initial reaction was over. Enlarged lymph nodes and palpable liver and spleen were occasionally found, but they might be absent in the presence of definite persisting infestation, and of course might be present due to other causes in the absence of this disease. Laboratory findings might be equally inconclusive. Although mature ova in the stools indicated the continued presence of infection, their disappearance did not necessarily mean that a cure had been effected. The ova frequently disappeared following treatment, only to reappear at a later date. Total white count and eosinophil count were influenced by too many extraneous factors to be reliable guides of the course of the illness. Skin sensitivity tests and sigmoidoscopic examination gave promise of aiding in evaluating the progress of the infestation but were still in the investigative stage. Finally, patients' complaints, as will be seen, were useless as indicators because practically none were specific to the disease, and most were characteristic of emotional rather than organic disturbance.

The situation was further complicated by uncertainty as to the action of the trivalent antimony compounds used as therapeutic agents. It seemed that though they might cause the ova to disappear temporarily from the stool, they often failed to kill the parasite. At the same time they not infrequently caused toxic reactions usually mild, but occasionally accompanied by manifestations such as nausea, vomiting and muscular pains, which complicated the symptom picture.

In short, at the time of this study acute schistosomiasis was a poorly understood clinical entity with protean symptomatology and no certain objective means of evaluating severity or progress, for which the only remedy was not completely efficacious and was often somewhat toxic. One did not know how to be sure a patient was cured, or what part of the symptoms of a given patient at a given time were due to the parasite, what part to the treatment, and what part to his emotional reactions. Disposition policies were in a state of flux necessitated by changing understanding of the disease. The result was an atmosphere in which rumors flourished and disability-producing attitudes throve.

II. Results

A. General Survey

The study group consisted of a random sample of 50 patients who had had schistosomiasis proven by the finding of ova in their stools, who had had one or more courses of treatment with antimony compounds, and who had been hospitalized continuously for a long period of time. They had all passed the acute stage. When it was bruited about that there was an opportunity for a psychiatric interview, a few patients asked to be seen by the psychiatrist, and a few were referred specifically as psychiatric problems. Although the information obtained from these patients influenced the considerations to be reported, they are not included in the statistical summary of the results. Each patient was seen for a single interview lasting one-half to one hour. The results obtained from this interview were supplemented with information from the clinical record.

The average hospital stay of these patients at the time they were seen was 105 days, with a range from 68 to 148 days; that is, the shortest period of hospitalization was something over two months, the longest almost 5 months. These abnormally long periods in hospital resulted from the need to observe the patients for a sufficient period to determine the effectiveness of treatment.

Schistosomiasis was the main reason for hospitalization for all the patients studied. However 15 had other pre-existing or concomitant organic disease such as hookworm, amebiasis, and hepatitis, and 6 showed evidence of pre-existing psychoneurosis or simple adult maladjustment. It is believed that these more or less incidental findings did not appreciably influence the results.

With respect to the treatments given, 40 of the patients had received fuadin, 10 of them after a course of tartar emetic. The remaining 10 had received tartar emetic alone. Toxic reactions occurred during or immediately following 18 of the 20 tartar emetic treatments. Although less frequent after fuadin, they were not unusual, being

reported in 27 of the 40 patients receiving this drug. Almost all these patients were seen several weeks after the last course of treatment so that acute toxic reactions played no significant part in the findings.

Of the 50 patients, 35 were hospitalized because they had clinical symptoms of schistosomiasis sufficiently severe to cause them to report to sick call. The remaining 15 were hospitalized on the basis of ova found in their stools on routine surveys. No relation between the severity of the original attack and the degree of disability at the time the patients were seen could be determined.

B. CLINICAL STATUS

An overall evaluation of the degree of disability of each patient based on history and impression at the time of the examination was attempted. Although this estimate may have been highly inaccurate for some individuals, it indicated a clear trend which is felt to be reliable. This was that the vast majority of the patients were neither in robust health nor strikingly incapacitated. Only 2 were considered to be so sick as to require further hospitalization. One of these was a severe hypochondriac the major part of whose symptoms long antedated his schistosomiasis. In the other a large functional element was suspected but could not be proven. At the other extreme only 2 patients seemed essentially symptom free and ready for full combat duty. All the remaining 46 were judged able to perform at least light non-combat duty, but still not entirely restored to health.

Objective findings attributable to schistosomiasis were infrequent. Only 7 of the 35 patients who were checked in this respect had physical findings which might possibly have been due to the disease. Of these, 5 had palpable cervical glands, one a palpable liver and one a palpable spleen. As regards the laboratory findings, only one stool showed mature ova and 3 immature ova, the remaining 46 being negative. Only 2 patients had a total leucocyte count over 15,000. Eosinophilia was not uncommon, being over 5% in 38 patients and over 15% in 10. Subjective symptoms, usually of a mild sort, were as common as objective findings were rare. Although in many cases they were elicited only by direct questions, only one patient produced no symptoms at all.

By far the most common complaints were weakness or fatigue, present in 40 patients, and shakiness, reported by 35. These two usually occurred together, the patient complaining that they came over him in waves, or that he became shaky on mild exertion. Next most frequent were headaches, which occurred in 23, upper abdominal cramps present in 19, blurring of vision found in 12, aching or stiffness present in 11, insomnia in 11, irritability in 9, and restlessness in 9, Of the less frequent complaints, 6 patients complained of loss of appetite, 5 of epigastric swelling, 4 of chest pains, 4 of loss of interest in things, and 3 of concentration difficulty.

The most striking characteristic of the more frequent symptoms was the inability to allocate the relative rôles of parasitical infestation, antimony, and psychogenic factors in their production. Some of the rarer ones, such as insomnia, restlessness, loss of interest, irritability and concentration difficulty, would appear to be essentially expressions of emotional tension. Blurring of vision and stiffness or aching of muscles and joints occur as acute toxic effects of antimony. Whether their continued presence long after the drug has presumably been totally excreted may still be attributed to this, is doubtful. The most prevalent symptoms however—weakness, shakiness, headaches and epigastric cramps—could be caused by any combination of several factors. All are frequently seen on a purely psychogenic basis. On the other hand, epigastric cramps and headaches are bona fide symptoms of schistosomiasis, and some patients reported that shakiness and weakness occurred only during treatment, stopping soon after antimony was discontinued.

A further factor which must be considered in the evaluation of these symptoms is the effect of long hospitalization *per se*. Questioning of a small group of ambulatory surgical patients without schistosomiasis who had been hospitalized several weeks showed that a large proportion complained of weakness and shakiness, the most common complaints of the patients with schistosomiasis. A recent study of soldiers hospitalized for many months following hepatitis stresses the

prevalence of the same symptoms, presumably on a psychogenic basis(1).

In summary, it seems likely that a considerable part of the incapacity of these patients was not directly related to schistosomiasis, but should be attributed to such factors as emotional strain and the effects of prolonged hospitalization.

C. ATTITUDES

In an attempt to gain an understanding of the emotional stresses under which many patients seemed to labor, questions were asked about such topics as the disease itself, the treatment, the ward officers, the problems of immediate disposition and the more remote future and, finally, about the sources of the information that the patients had accumulated and its effect on them. In evaluating the answers to these questions it must be kept in mind that the situation was not conducive to frankness. Most patients knew that the interviewer was a psychiatrist, which at once tended to put them on the defensive. An effort was made to circumvent this difficulty by explaining to the patients at the start of the interview that they had been picked at random, not because it was felt that the ministrations of a psychiatrist were needed, that the purpose of the interview was to get information on attitudes which would be helpful to all concerned in planning future treatment, and that nothing they said would be entered in their clinical record. Although most patients seemed to accept these statements and replied in good faith, it may be assumed that some patients suppressed unfavorable attitudes and opinions. On the other hand those who seemed most distrustful of or hostile towards the interviewer were usually the ones who expressed themselves most freely. So all in all the results obtained probably bear a reasonable approximation to the actual state of affairs.

These men displayed the attitudes which might be expected to develop under the circumstances in which they were placed. Their illness had begun usually, with an unpleasant array of symptoms, which had been compounded by the discomforts of treatment. This had been followed by a necessarily lengthy period of hospitalization with ample time to brood and daydream. Due to the large number of patients under treatment, there was little opportunity for the individualized reassurance which might have counteracted unhealthy preoccupation. Material for worry was supplied at every turn. Treatment was prolonged and uncomfortable, then might be repeated after it was supposed to be finished. Disposition appeared to the patients to be arbitrary and capricious—some men were said to have gone home, others went back to their units, still others were discharged and then showed up in the hospital detachment. The air was full of information and misinformation, and there was no way of separating the wheat from the chaff. The information supplied by doctors seemed to be contradicted by radio broadcasts which took an alarmist view of the illness in order to discourage bathing in infected streams. Some men wrote to friends at home to look the disease up and write them about it, others found an article in an encyclopedia or read the circular that came in the packages of fuadin. Every man tossed his scrap into the witches cauldron of rumor.

The dominant attitudes which appeared in this setting were resentment, anxiety and confusion. In only 7 patients could none of these three clearly be detected, and in several of them it was felt that these attitudes were present but concealed. Thirty-three patients or just two-thirds expressed some resentment, and 24 each indicated some degree of anxiety or confusion.

With respect to their feelings about their present condition, only 2 patients were willing to say categorically that they thought they were cured. On the other hand, 26 were convinced that they still had the disease. The remaining 22 were undecided, but most leaned towards the belief that they were still sick. As might have been expected the chief reason given for disbelief in a cure was that they still didn't feel well. These doubts were fortified by the non-committal attitude of the ward officers, and by the re-treatment of some patients after an interval.

Uncertainties about cure were frequently accompanied by concern about the future, a worry admitted by 31 patients. However, the attitudes taken towards this varied widely. Some patients were frightened and depressed. Others seemed mainly concerned that the

Army care for them until they were well. A few took a highly realistic and sensible attitude. For example, one, who had made a good recovery from cerebral schistosomiasis, stated that he was making plans to open a toy store in connection with his uncle's lumber yard, if his strength did not return sufficiently for him to go back to his old job as carpenter.

Lack of faith in cure was paralleled by lack of faith in the treatment. Only 23 patients, or slightly less than half, seemed convinced that the treatment had helped them. Twenty-two were uncertain. The remaining 5 believed that the treatment had left them worse off than they were before. As has already been pointed out, treatment was of necessity experimental to the extent that the most effective dosage and compound of antimony in fresh schistosomiasis infections had not yet been worked out. Most of the patients were aware of this, 28 being willing to express the belief that they had been used as "guinea pigs." It is believed that this opinion was more nearly universal than this figure suggests. It is difficult to tell a medical officer that one believes other medical officers are experimenting on him. The significant point is that 17 of the 28 who thought they were being experimented on recognized the necessity of this and seemed to harbor no resentment. Typical remarks expressing this attitude were: "We have been guinea pigs of necessity. Experiments have been made with our welfare in mind." "Someone had to be in on it to keep someone else from getting it. Someone had to give it a trial." "If they ain't got no cure for it they might as well practice on me as anyone." "If it's necessary for them to experiment on me to clear it up, it's the best they can do."

The patients' doubts and uncertainties were also reflected in their attitudes towards the harassed ward officers caring for them. Only 12 seemed to have full confidence in their physicians. On the other hand, 15 made unfavorable comments and the remaining 23 wouldn't commit themselves. Of this group some may have been afraid to express their views. The criticisms were directed chiefly at four points. The first of these, a clear manifestation of anxiety and uncertainty, was that they were not being kept sufficiently informed about the treatment: "I'm disgusted. Nothing ever seems to be done. We just keep around and they keep doing something to us and we don't know what's going on." "I know I'm being used as a guinea pig. I felt kinda peeved at first but I can't do much about it." "Everyone would have felt a lot better if they explained it first."

The second criticism was directed at what was felt to be a lack of consistency: "They say it isn't serious, yet they keep us around here and won't let us work." "They tell you one thing one day and kind of contradict themselves. Like they say the sickness is all in your head, and then they want to give you more shots." "If they told me I was completely cured, I don't see any necessity for being kept under observation. If they're going to keep me under observation they deny themselves."

The third complaint was that ward officers appeared insufficiently interested: "When a man tells you a pain you can't stand is in your mind, you know the feeling you get." "I tell them something and they just pass it off as though it didn't exist." "You go to a doctor with a little complaint and he says its schisto. I feel I might as well be talking to myself." These comments were, of course, a reflection of the insecurity and irritability of the patient rather than of the actual attitudes of the ward officers, who gave as much individual attention as possible under the hectic conditions which prevailed.

Resentment in a very few patients, finally, reached such a pitch as to result in the absurd suspicion that the physicians were trying to make a name for themselves at the patients' expense: "The talk is going around that someone is trying to make a name for themselves. It's logical. We're in no position to act on it."

With respect to attitudes towards disposition, perhaps the most significant finding was that in spite of the prevailing atmosphere of invalidism, only 30 patients expressed a wish to be sent home. Many felt that all that mattered was to regain their health, and that they preferred to stay in this theatre if this result could be achieved here. One motivation which played a part in this attitude was unwillingness to distress their families by returning home as invalids. Another was

a feeling of responsibility to comrades still fighting. For some patients, being invalided home was equivalent to deserting their friends. Such men pleaded to be returned to their organizations, or failing this, to be allowed to support their comrades by working in rear areas.

From the standpoint of rehabilitation the most important fact about the attitudes towards disposition was that many of these patients were receptive to the thought of remaining at some form of duty in this theatre. The unconfirmed possibility of being sent home was probably more disturbing than definite knowledge that they were to remain here would have been.

D. INFORMATION

The patients' understanding of schistosomiasis varied widely, but on the whole it was poor. Of the 50 patients, only 12 were considered to be well informed about the disease. Their knowledge was accurate, with an adequate evaluation of those aspects of schistosomiasis about which no certain knowledge exists. Ten patients had only very meagre and usually inaccurate information. They seemed to have remembered primarily the alarmist rumors. The remaining 23, or about half, had a certain amount of accurate knowledge heavily spiced with rumor and conjecture.

One item used as a check on how well these patients were informed, was whether or not they knew that the worms could not reproduce in the body. This fact is particularly significant because it can be used therapeutically as evidence for the self-limited nature of the disease. Of the 50 patients, 17 were sure that the worms did not reproduce, but 6 were sure they did, and 27 didn't know. It was disconcerting to discover that quite a few of these admitted having been told by the doctors that the worms did not reproduce, but stated that they didn't know whether to believe it or not. In other words, they had reached the point of doubting anything from any source.

Although a certain amount of confusion was inevitable in as poorly understood a disease as schistosomiasis, part of it was attributable to inability to control the dissemination of information. There were many sources which sometimes contradicted each other, and the implications of the material presented were not always adequately clarified. The chief sources of information were rumors, the statements of the doctors, the radio broadcasts cautioning men to stay out of streams, and an exhibit of the disease, either a travelling one or one presented at a lecture by a member of the staff of the hospital. A few patients had managed to read about the disease in an encyclopedia or a text on tropical medicine, and some had seen the circular accompanying the fuadin ampoules. Of the major sources, all but the physicians apparently increased apprehensiveness or resentment rather than allaying it. Even the doctors were felt to be reassuring by only 19 of the patients. All other sources were universally reported as either neutral or upsetting in their effects. These may be considered briefly in turn.

The rumors which seemed to make the most impression were either those connected with immediate disposition or those concerned with future disability. Fifteen men thought they knew that some patients had been sent home, and 13 had picked up the notion, to support this, that the disease shows a more rapid recovery in a cold climate. A chance sentence in *Time* magazine about dogs with schistosomiasis being rushed to the U. S. by plane was the source of this. Twelve men reported the rumor that one would soon die of the disease, 8 that it made one a permanent invalid and 12 that it produced prolonged invalidism.

The radio broadcasts were highly colored statements of the supposedly disastrous effects of schistosomiasis. While the broadcasts were fully justified by their striking success in stopping the further spread of the disease, their effect on those few who had already contracted schistosomiasis were often unfortunate. This was not only because of their alarmist nature, but because they contradicted other more reassuring sources. Since the voice of radio always carries a certain authority, the result was to produce confusion in the patients minds: "Either the radio or the doctors are screwed up about something. I suppose the doctors are right, but then I suppose the doctors write the radio program." "They tell you in the hospital schistosomiasis isn't serious. On the

radio they say it kills. That breaks down the morale of the fellows who got it." Because of this aspect, these broadcasts were discontinued at about the time this survey was undertaken.

The schistosomiasis exhibit occasionally alarmed patients who had not realized that it required massive or repeated infections to produce ascites or destroy livers. This point, if clarified, could perhaps have been turned to good advantage, by pointing out how much better off the patients, with their single brief exposures were by contrast.

The only important criticism made of the information supplied by doctors was that it was so extensive as to be confusing. As one man put it: "The doctors gave us so much information it got all balled up in my head."

The question arises as to the desirability of trying to inform patients about their illness. A few of these patients apparently tried to combat their anxiety by attempting to shut their minds to knowledge of their own condition or of the disease itself. One man said: "I think I shouldn't be told (about my stools) for my own peace of mind. If you told some their stools were normal and didn't tell others, the others would worry." Another put it more simply: "What you don't know won't hurt you." As might be expected, this "head in the sand" attitude was seldom successful. Most patients maintaining this pose were mines of alarmist rumors. The majority showed a desire for information, based on a realistic and healthy attitude, expressed in such terms as: "I'm old enough to know the truth. If I'm going to die tomorrow I've faced it before." Since all patients, regardless of their expressed attitudes, were certain to pick up information in one way or another, and since accurate knowledge, even if not entirely roseate, is one of the best antidotes for anxiety, efforts to give patients accurate and clear information about their illness would seem to be fully justified.

E. INDIVIDUAL REACTIONS

The reactions of the individual patient to schistosomiasis were of course determined not only by the circumstances already discussed, but by his own personality and attitudes. He tended to seize on those aspects of the situation which fitted in best with his own preoccupations. The following two cases, one of whom reacted primarily with anxiety and the other with hostility, may serve to illustrate this point.

CASE 1.—This 20-year-old infantry man was apparently infected by marching through rice paddies. He had a moderately severe onset with pain in his eyes and back of his neck, stiffness, chills and fever. He received nine fuadin treatments. At the time he was seen he had been 128 days in the hospital.

In the interview he made the impression of a youth who has been accustomed to the society of older people and was at ease with them. His dominant mood was one of apprehensiveness, and he appeared somewhat depressed. His opening words were, "I hope you don't think I'm crazy." He complained of constant headaches, extending down the back of his neck, anorexia and shakiness, and difficulty concentrating. He spoke of his "overall weakness" and easy fatigue. Finally he complained of anxiety dreams, of which an example was trying to fire his pistol at charging Japs but being unable to pull the trigger.

A brief survey of his background revealed him always to have been a seriousminded, insecure type of person. He described himself as "not frivolous." As a child he walked in his sleep, feared spiders, and for years had a light burning all night in his bedroom. Although he had had no serious illnesses, his health had never been robust. He was taking a premedical course at the time he was inducted, which may have been related to his exaggerated concern over his condition. It is interesting to note the patient's statement that in combat on Leyte and Samar: "I was surprized to find that I wasn't frightened at all." In other words, the enemy seemed to have been less of a threat to to him than a bodily illness.

With this background of anxiety and hypochondriacal tendencies, it is not surprising that, despite a good intelligence and the fact that he had a clear picture of the pathogenesis of the disease, he tended uncritically to accept all alarmist rumors. An example was: "One doctor was supposed to have told one of the fellows that untreated you have 5 years to live, treated you have at least 20 years." He found the radio "kind of difficult to reject, since it comes from the same official source as the other things come." He was chiefly worried by his persistent weakness and wondered if he would ever feel better. He was open to the thought that the doctors didn't know what they were doing, but "if it's necessary for them to experiment on me I suppose it's the best they can do." He didn't care whether he was sent home or not, as long as he was cured.

CASE 2.—This 25-year-old combat engineer apparently contracted the disease by swimming in an infected stream. He had a moderately severe onset with cramps, backache, aching in his bones and moderate diarrhea. He had received both tartar

emetic and fuadin. When seen he had been 111 days in the hospital.

His attitude in the interview was one of brash cheerfulness, with an undercurrent of suspiciousness and hostility. He showed no anxiety in his manner. He tended to use a vocabulary above his educational level and made a great show of superficial but poorly digested information, in general giving the impression of striving for effect. He was essentially symptom free, but stated that he felt a little shaky at times, occasionally slept poorly, and was somewhat sluggish for lack of exercise.

He was a Mexican whose life had been dominated by an urge to "independence," and defiance of authority. He described himself as an "individualist." He left school early in order to achieve financial independence, and made a great point of saving his money, as a means of being self-sufficient. He changed jobs frequently, usually because the new job offered more pay. Apparently he had a knack for picking up skills. His aggressiveness found an additional outlet in prize fighting.

In his four year army career he had repeatedly received recognition for his abilities, then lost it because of difficulties with those in authority. He reached the rank of 1st sergeant once, staff sergeant twice, and sergeant 3 times, according to his story. When seen he was a private and had been for a year. He stated that all his reductions in rank were due to refusals to obey orders he thought were unreasonable.

With this background, he met the threat to his future independence implied by schistosomiasis by attacking the doctors, the implication being that if he could discredit them he might be able to convince himself that he didn't have the disease after all. His opening remark made clear that his main concern was that he be able to make his own way when the army discharged him: "As long as I have schisto and they don't cure me I won't accept a discharge." The implication was that the Army planned to discharge him as an invalid. He tended to exaggerate rumors concerning the severity of the disease, in such a way as to hide his own anxiety by making it seem ridiculous. The following typical statement was made in a tone not of alarm but of scorn: "They said I was cured but from what I read and heard on the radio I don't believe it. It's liable to wreck your brain or to paralyze you. The encyclopedia says it can give you cancer." He seemed bitter because he wasn't allowed to examine his own stools before treatment was started, and said flatly: "They treated me without showing me I had it, just on their own word. I still believe I didn't have it. The doctor himself told me I was a guinea pig. He may have been joking but that wasn't the time to joke. I would like to tell a few of the doctors what I think."

III. Discussion

It seems clear from this survey that worry, resentment, lack of confidence, and similar unhealthy attitudes have been at least partly responsible for the prolonged disability of patients who have had schistosomiasis. The reduction of invalidism in this disease as in all others depends not only on the administration of the proper drugs, but on the maintenance of the proper therapeutic atmosphere. The most important healing attitudes seem to be faith in the physician and expectancy of recovery, which in the Army implies expectancy of return to duty. Certain directions in which efforts to encourage these attitudes may profitably be expended are suggested by this study.

With respect to expectation of recovery, it should be pointed out that in the Army hospitalization often represents a rather desirable state, in contrast to hospitalization in civilian life. The hospitalized civilian has powerful incentives drawing him towards recovery. Leaving a civilian hospital means terminating the expense of hospitalization, returning to the emotional support of one's family, and resuming gainful work. In the Army, hospitalization not only involves no financial sacrifice but is sometimes a refuge from arduous or unpleasant military duties. In addition, there is always the hope that if one remains sick long enough, one may be sent back to the United States, a hope encouraged in schistosomiasis patients by rumors that some had already been sent home. These factors are counteracted to some extent by the strong desire to regain one's health, present in almost everyone. In addition, it is often possible to appeal to the individual soldier's self-respect in at least two ways. One is through his feeling of responsibility to his comrades, whom he may feel he is letting down by remaining an invalid. Another is reluctance to be discharged from the army with a certificate of disability. This implies worrying his family, perhaps a handicap in obtaining work, and the problem of explaining to civilians why he is not in uniform when his friends are still fighting.

Maintaining the patients' faith in the physician, which is an automatic matter in illnesses which are well understood, becomes a real problem in relatively unknown conditions like schistosomiasis. Since each patient reacts to the situation in accordance with his own particular needs, the obvious first requisite is to regard each patient as an individual.

A few minutes at the end of the initial examination devoted to discovering and attempting to meet the patient's personal worries are usually well worth while from the standpoint of creating a good therapeutic relationship.

Confidence is best maintained by creating a situation in which the patient relies on his physician as the main source of information. The purpose in presenting information is not primarily to instruct the patient, but to create in his mind the feeling that his physician has fully grasped his condition and has the entire situation thoroughly in hand. Therefore the material should be selected with a view to stressing those points which are most likely to have this effect. An attempt to give the complete picture of the disease, as one might to a group of medical students, often only creates confusion by swamping the patient with more facts than he can digest.

Those aspects of the disease which lend themselves to an optimistic interpretation should be emphasized. One such in schistosomiasis is that the flukes cannot multiply in the body. It will be remembered that only a third of the patients seen had fully grasped this fact. It was found that clarifying this for patients who had not appreciated its significance had a powerfully reassuring effect in many instances.

While the presentation should be as optimistic as is consistent with accuracy, false optimism should be avoided, since it often tends to decrease the patient's confidence. For example, one patient stated he lost all confidence in his physician when he said that schistosomiasis was no worse than a bad cold.

When potentially alarming information is presented, as it must be at times, in order to counteract even more alarming rumors, the mitigating aspects should be stressed. Thus, of the schistosomiasis patients who saw pictures of Filipinos with ascites or a liver destroyed by parasites, very few realized that this was the end result of repeated or massive infestation, in contrast to their own brief and limited contacts with the parasite. Similarly, while it is futile to deny the existence of severe reactions since patients quickly learn of them, it can be pointed out that, with rare exceptions, they seem to occur only at the time of the original infection. Patients who have had the disease for several weeks without a severe reaction need not fear one.

When uncertainty exists, it is better to admit it than to offer reassurances which time is apt to disprove. However, it is important to specify carefully the area of uncertainty and to indicate the means by which it is to be minimized. In schistosomiasis this problem is most acute with respect to the question of cure. If the patient is led to believe that a course of antimony will cure him and then the treatment must be repeated, his confidence in the doctor is certain to suffer. On the other hand, an admission that a single course of treatment, while helpful, might not be curative and might therefore require repetition would have allayed rather than increased anxiety in many patients. At least it would have helped to counteract the demoralizing and completely groundless belief of some that they were being irresponsibly experimented on.

In general, in an unfamiliar disease the question of prognosis should be formulated in terms of ability to perform one's duties rather than in terms of cure. The patient with schistosomiasis should be told that the presence of a few parasites is perfectly consistent with full efficiency, that he will be checked at regular intervals, and more treatment given if indicated. The situation is closely analogous to that of tuberculosis. Many patients with this disease are able to face life with confidence in the presence of obviously persistent infection. In this connection a rehabilitation program, such as that found in many army hospitals, is of the greatest value. Such a program effectively combats the physical and moral deterioration resulting from prolonged inactivity. It not only helps to restore muscle tone but reduces the time available for fretting. By its very existence it creates a stronger expectation of recovery in the mind of the patient than merely verbal reassurance.

In poorly understood diseases one must be alert to the appearance of new rumors. These are constantly emerging as patients seize and elaborate upon any scraps of information which present themselves. Meeting rumors promptly not only stops the spread of false information, but tends to consolidate the physician's control of the situation.

The importance of consistency need hardly be stressed. Contradictions between authorities are obviously highly destructive of confidence. In an army setting care must be taken that ward officers do not contradict each other or other supposedly authoritative sources such as the radio. Self-contradictions are at times difficult to avoid when knowledge is constantly changing. The danger can be minimized by presenting only what is definitely known at a given time, and avoiding speculation.

IV. Conclusion

This survey indicates that patients suffering from unfamiliar diseases, of which schistosomiasis is an example, tend to develop emotional reactions which impede recovery, such as anxiety, resentment and confusion. To keep disability at a minimum, therapeutic efforts must be directed not only to overcoming the pathogenic agent but to maintaining the patient's confidence in the physician, and encouraging his expectation of return to useful activity.

BIBLIOGRAPHY

1. Benjamin, Julien E., and Hoyt, Ralph C. Disability following postvaccinal (yellow fever) hepatitis. J. A. M. A., **128**: 319 (June 2), 1945.

2. Rome Howard P., and Foge, R. Harwood. The psychosomatic manifestations of filariasis. J. A. M. A., **123**: (December 11), 1943.

PROGNOSIS OF WAR NEUROSES WITHOUT PSYCHOTHERAPY[1]

CAPT. PAUL H. HARWOOD, JR., M.C., Army Air Forces

The primary objective of this study was to determine which war neurotic enlisted personnel admitted to a convalescent hospital could be expected to return to duty in a relatively asymptomatic state with only occupational (convalescent) therapy, but without specific psychotherapy.

Patients and Methods

The patients were Army Air Forces enlisted personnel, flying and non-flying, returned from overseas duty in various theaters throughout the world. Approximately 2½ months had elapsed between the completion of active duty and arrival at this zone of interior convalescent hospital. This interval consisted of about 5 weeks from relief of duty to arrival at port of entry; 4 weeks furlough plus travel time, and one week at a redistribution station. Fifty-six men of the total series of 61 followed this course. Of the remaining 5 patients, 3 had been evacuated from overseas theaters as psychiatric casualties, and 2 were admitted from continental command hospitals after serving a few weeks duty following reassignment from a redistribution station.

These 61 consecutive cases were admitted to a special ward from the receiving ward of this convalescent hospital during a six-day period. They were unselected, except for 2 men who were excluded from this special ward because of marked alcoholism and disorderly conduct while in the receiving ward. Three of the 61 patients admitted to the special ward were dropped from the study, due to extended furloughs during the period of observation in two cases, and gunshot wound of the stomach in the third instance. Thus, 58 patients were left for consideration.

Each of these men was initially interviewed for 45 minutes on entry to the special ward for history taking. A ten-minute progress interview was conducted after 2 weeks; and at the month's end each was carefully studied to determine clinical improvement and other data. At no time during the month was any attempt made to deal with material brought up in the interviews, nor was a close doctor-patient relationship encouraged. The men were pushed into convalescent activities, which were stressed as the principal therapeutic measures.

The data obtained dealt with the following factors:

1. Quantity and type of symptoms of anxiety.
2. Predisposition.
3. Overseas stress.
4. Results of hospital stay.

Definition of Terms

Anxiety was graded into four degrees. Sharp gradation was obviously impossible, but any medical officer with experience in treating sizable numbers of war neurotics has no difficulty in such rough quantitation. Care must be taken, however, to include the amount of anxiety bound by hysterical conversion symptoms, or concealed behind a schizoid façade, alcoholism, compulsive rituals, etc.

Predisposition was taken to mean the character of the soldier existing prior to enlistment, predisposing to the precipitation of war neurosis under military stress. This character, in turn, is the resultant of constitutional and early environmental factors operating to produce potential or actual neurosis in civil life. The environmental predisposing factors include the familial, cultural and economic influences acting upon the individual to produce neurotic traits in childhood and evidence of maladjustment in later years as revealed by the personal, school, work and medical histories. The degree of predisposition was roughly graded into four divisions: minimal, mild, moderate and severe. The severest predisposition represented a combination of factors culminating in a full-blown civilian neurosis. An important feature in the total picture of predisposition is ego strength, an index of which may be gained from the success of the ego in mastering early neurotic conflicts in the later years.

[1] From the A. A. F. Convalescent Hospital (Don Ce-Sar), St. Petersburg, Florida.

Overseas stress was divided into combat and non-combat types, and combat stress was quantitated in three degrees. Non-combat stress indicated that the patient had not been exposed to enemy action and had usually been stationed in areas outside the combat zone, *e.g.*, Greenland. There were no flying personnel in this group. Combat stress involved both ground and flying personnel; the former encountering enemy action by being bombed or strafed on the ground, and the latter primarily by the enemy action encountered by bomber crews. Quantitation of combat stress ranged from mild, which might involve undergoing a few air-raids, to severe, wherein a flyer might have undergone a severe tour of combat missions, including crashes, bailouts, or escape from enemy-occupied territory.

Improvement was expressed in terms of fitness for military duty. Only two categories were used: markedly improved or relatively unimproved. The former showed progressive clearing of signs and symptoms under observation or continuation of improvement begun before entering the hospital.

RESULTS

1. *Improvement*:
   - Markedly improved ..... 26% (15 cases)
   - Relatively unimproved ..... 74% (43 cases)

	Improved (15 cases)	Unimproved (43 cases)
2. *Anxiety*:		
Minimal	20% (3)	..
Mild	73% (11)	39% (17)
Moderate	7% (1)	42% (18)
Severe	..	19% (8)
3. *Predisposition*:		
a. Degree:		
Minimal	33% (5)	4% (2)
Mild	53% (8)	16% (7)
Moderate ...	14% (2)	30% (13)
Severe	..	50% (21)
b. Ego strength (how well ego dealt with early predisposition):		
Poorly	..	33% (14)
Moderately ..	27% (4)	53% (23)
Well	73% (11)	14% (6)
4. *Overseas stress*:		
a. Type:		
Combat	100% (15)	81% (35)
Non-combat .	..	19% (8)
b. Degree of combat stress (excluding 8 non-combat cases)		
Mild	20% (3)	20% (7)
Moderate ...	40% (6)	54% (19)
Severe	40% (6)	26% (9)

ANALYSIS OF DATA

The approximate one-fourth of the total series fell into the markedly improved group, characterized by:

1. *Mild Anxiety.*—93 percent, or all but one, of the improved cases showed minimal or mild anxiety, in contrast to 39 percent of the unimproved patients. None of the unimproved group was minimally graded.

2. *Mild Predisposition.*—86 percent of the improved group gave evidence of minimal or mild predisposition, whereas 20 percent of the unimproved group were predisposed to a like degree. Here again, the percentage of minimally predisposed patients was far greater in the improved group (33%) than in the unimproved (4%). Ego strength, properly a function of predisposition, was distinctly greater in the improved cases, of which 73 percent had successfully dealt with their early predispositions in later years, contrasted with only 14 percent of the unimproved men who had done so.

3. *Combat Stress.*—All of the improved cases had been subjected to some form of combat stress, whereas 19 percent of the unimproved group failed to answer this qualification. (None of this 19 percent were flying personnel.) The degree of combat stress, however, was not found to have consistent correlation with improvement.

DISCUSSION

No attempt was made to sort out the basic personalities, the neurotic syndromes existing prior to enlistment, or the reaction patterns to anxieties precipitated by overseas stress. Excessive dependency prior to military stress appeared to be the most common characteristic of all the men, being present in all the improved group and in at least 81 percent of the unimproved group. The degree of dependent regression found in all the improved cases decreased during the month under observation to a level approaching their individual pre-military levels, which, in turn, appeared to be greater than the expected average of a comparable group of non-neurotic individuals. It would seem that ego strength, in the improved group, had passed a critical point following which improvement had steadily proceeded.

In 2 of the improved cases, some of the improvement was attributed to recovery from reaction produced by home situations confronting these returnees during their recent delay en route.

Neurotic syndromes, containing varying degrees of anxiety, were diverse and overlapping. Nearly all evidenced psychosomatic concomitants of anxiety. Some converted their anxiety by hysterical mechanisms. In others, there were relatively fixed premilitary characters or neuroses, including very rigid personality, constitutional psychopathic personality, compulsive-obsessive neurosis and neurasthenia. Those with the last-named personalities or neuroses, as might be expected, fell into the unimproved group.

It is interesting to note that 100 percent of the total series could be said to have anxiety irrespective of the type of syndrome presented. Anxiety, therefore, may be used as the most practical yardstick in measuring the clinical severity of this group. There must be added to the free anxiety that fixed by hysterical conversion, concealed by ritualistic defenses or alcoholism, or not well incorporated by the ego, in which case the patient may appear withdrawn, confused and schizoid. The positive correlation of lesser degrees of anxiety with improvement might have been expected, since large quanta of anxiety in a patient far removed in time and space from the precipitating stress must necessarily indicate a severe degree of sustained psycho-physiological disruption.

Predisposition to breakdown under military stress has long been recognized as a very important factor in the histories of war neurotics. In this war, a past history of neurotic symptoms was found in approximately 90 percent of naval war neurotics, both in combat and non-combat overseas personnel, by Schwab, Finesinger and Brazier.[2] This was in sharp contrast to their positive findings in only 17 percent of a control series subjected to essentially the same combat stress without developing war neuroses. These findings are in accord with the present study where all patients presented evidence of predisposition, with the degree greater in the group failing to show significant improvement without psychotherapy. Possibly the reason why all of these cases showed predisposition, whereas only 90 percent of Schwab's series did, is that neurotic symptoms were the criteria in his group, whereas excessive dependency was also taken as an indication of predisposition in the present study. The same prognostic relationship of relatively mild predisposition to recovery was also found by Grinker and Spiegel[3] in acute war neuroses seen in combat zones soon after breakdown had occurred.

The *type* of overseas stress, combat or non-combat, appeared to have practical prognostic value in this study. Schwab and Rochester,[4] in evaluating a group of naval war neurotics under specific treatment for 4 to 6 weeks in overseas hospitals, concluded that those with combat precipitated neuroses showed a greater tendency to recover than did a group with neuroses developing under non-combat conditions. This holds true in the present study, since none of the men with non-combat precipitated neuroses fell into the improved group. Comparison of these two studies is not strictly valid due to variations in treatment, etc., but the inference is interesting. When the *degree* of combat stress is used to determine prognosis, it is difficult to estimate the degree because the nature of the stress is far from uniform. In this study, such quantitation did not sharply favor either the improved or unimproved group. Close to the scene of battle such a quantitation might be undertaken with some success. Grinker and Spiegel[3] found that the greater the precipitating trauma necessary to produce a war neurosis, the better the outlook for recovery. But at this hospital, remote in time and space from the precipitating trauma, it is not feasible to determine the degree of stress other than by dividing the men into those exposed to enemy action and those not so exposed. Furthermore the fallacy in grading stress objectively is that no account is taken of the

[2] Schwab, R. S., Finesinger, J. E., Brazier, M. A. B.: Psychoneuroses precipitated by combat. U. S. Nav. Bull. **42**:535-544 (March) 1945.

[3] Grinker, R. R., and Spiegel, J. P.: War neuroses in North Africa. Josiah Macy Foundation, 142-148 (September), 1943.

[4] Schwab, R. S., and Rochester, H.: Prognosis of psychoneurotic breakdowns. War Med. **7**:12-22 (January) 1945.

specific relationship between individual predisposition and a certain type of stress. For instance, an objectively mild stress might produce great anxiety in a man specifically predisposed to just that type of stress, whereas far greater stress as determined objectively might not unduly disturb him.

Case Histories

Three cases are presented: two are illustrative of those improving markedly without psychotherapy, and one typifies those who remained unimproved.

Case 1.—*Marked improvement in a patient with mild predisposition and anxiety, and without symptoms overseas until exposed to the threat of enemy action.*

A 29-year-old supply sergeant of an Air Force service unit served 11 months in the North African campaign without exposure to enemy action. He remained asymptomatic despite subsisting on unpalatable "C-rations." His unit was then transferred to England, where he was subjected to frequent air-raid alerts and the threat of buzz bombs. After a few weeks of this, he felt tense and gastric psychosomatic concomitants of anxiety appeared: his "stomach felt tight" and ached, and there was anorexia and nausea at the sight of food. Nevertheless, he gained weight by drinking large quantities of milk, which had been denied him in Africa. These symptoms persisted until he was admitted to this hospital about one year after onset. During his furlough at home, following his overseas tour, he was irritated by his mother who tried to force him to eat and babied him. The return to military life seemed to relieve him, and the trend of improvement continued throughout his hospital course here. On admission his appearance suggested mild tension and restlessness; his complaints were anorexia, nausea at meals, and pain and fullness after meals, referred to the epigastrium. X-ray examination of the upper gastro-intestinal tract was reported negative for organic lesions.

Past history revealed that he was the "baby of the family." Both parents were oversolicitous and protective, pushing him when he hesitated. In childhood he depended heavily on them, but in his teens he was able to achieve considerable emancipation. His school, work and sex histories were not exceptional. At the age of 15 years, he had a dyspeptic illness lasting several weeks, characterized by anorexia and nausea, apparently caused by a food fad in which he indulged at that time. This was the consumption of large amounts of rich cream. He said, "Mother told me I was a sick boy, but the doctor pulled me out of it by giving me a diet without any milk or cream."

During the month under observation, these symptoms cleared, and his diet, which had consisted largely of milk on entry, became balanced. In his own words, "Now I an weaned."

Case 2.—*Marked improvement in a patient with moderate anxiety but with minimal predisposition Moderate combat stress.*

A 25-year-old engineer-gunner of a B-24 completed his combat tour of 47 missions in the southern European theater in a period of 9 months. Despite undergoing several severe missions, he withstood combat stress very well until the last two missions, which were flown with a new pilot. The patient had great confidence in his own pilot, but went to pieces when he had to fly with the green pilot. On his final mission he was struck over the eye by a fragment of flak, and this further increased his anxiety. Symptoms were tension, restlessness, irritability, depression, insomnia, anorexia, startle, tachycardia, and palmar sweating and finger tremor. This picture largely subsided during his furlough following return to the United States, but reappeared on return to military life. On admission to this hospital the signs and symptoms noted above were present to moderate degree. During the period of observation, there was marked clearing so that he was relatively asymptomatic on return to full flying duty. The lifting of the depression appeared to be largely related to the arrival of his wife. His spirit in the fight for health was admirable. On entry, his dreams were largely regressive; but, as improvement proceeded, the theme turned to his struggle to regain his masculine strength.

Past history showed no evidence of pre-existing neurosis. He was strongly dependent on his father, who was his good friend and ego ideal. The patient was constantly with him, sought to please him, and depended on his leadership. The father's death, several years ago, left him shocked and depressed for a period of about 6 months.

In combat, his regular pilot represented the supporting father, and the sharp increment in anxiety following a change to a green pilot reflected the pattern of his earlier life. His increased dependent needs were largely satisfied while at home and again when his wife joined him at this hospital. Closely related to this gratification was the subsidence of his anxiety and the progression to a relatively independent state.

Case 3.—*Lack of improvement in a markedly predisposed patient who developed severe anxiety under moderate combat stress.*

A 20-year-old engineer-gunner of a B-24 completed his tour of 35 combat missions in the northern European theater in 8 months. In the course of operational flying training in the United States he had been apprehensive and frequently airsick. In England, prior to his first combat mission, he saw a crash in which acquaintances were killed, and this produced marked fear of flying. His anxiety mounted steadily to a higher pitch during the course of his tour, and he drank heavily to keep going. Several severe missions were undergone, and the later missions were flown in a near-panic state. On return to the United States he found a distressing home situation. His wife wasn't sure if she loved him, and his son was boarded out to strangers. As he said, "When I

came back to the home I had dreamed of, my wife didn't cook for me or take care of me. She was too busy chasing other men." Throughout his hospital course he was markedly anxious and moderately depressed. He was very tense, there was marked manual tremor and generalized hyperhidrosis, speech was staccato, marked startle was present. He complained of anxiety attacks in which his "insides quivered." Combat dreams, insomnia and anorexia were prominent. Alcohol was often resorted to in order to aid sleep and relieve tension.

Past history was characterized by insecurity, anxiety and lack of dependent gratification. The father deserted the family when the patient was one year old. The mother remarried, but the step-father has always seemed a stranger to the patient. He was very closely identified with his mother, who is highly neurotic and has been under a doctor's care for several nervous breakdowns. He is the youngest of four brothers, but either felt rejected by them or rejected the support they offered. Enuresis was present until the age of 9 years. Nervousness has been in evidence as long as the patient can recall. In school he was secluSive, self-conscious, formed no close friendships with either sex, and stammered while reciting. At 15 years of age he quit school because of his anxiety in the presence of his schoolmates and went to work, unsuccessfully holding a succession of jobs. About 3 years ago he ran away from home and married a girl against his mother's wishes. The marriage went well for a year, but after he had joined the Army he heard that his wife was unfaithful, then he became depressed and drank heavily.

Discussion of Cases

A psychological profile may be sketched of the patient with good prognosis, as opposed to one with poor prognosis, by a consideration of these three case histories.

1. *Predisposition.*—Relatively mild neurotic predisposition is a vital characteristic of the patient with good prognosis. Of the improved cases, predisposition was mild in Case 1 and minimal in Case 2, but in Case 3 it was clearly severe. Both of the improved cases had been subjected to parental influences which were productive of excessive dependency, but each was able to adequately resolve the conflict of dependency versus independence prior to military service. And each was able to largely emancipate himself while under observation from the regressive dependency produced by combat stress. Contrast this with the third case, wherein the deserting father and the highly neurotic mother constituted extremely fertile soil for the development of childhood anxiety neurosis. And the neurosis which developed was never successfully resolved by the patient. Poor recovery from the additional anxiety produced by combat might have been predicted by his failure to achieve freedom from anxiety in civil life.

2. *Anxiety.*—Relatively mild anxiety is an important feature in the patients with good prognosis. Case 2, with moderate anxiety, was the only one of the 15 improved cases with more than mild anxiety, so that this criterion remains valid. It is an interesting contrast that in Case 2 anxiety was not precipitated until after 45 missions had been completed, whereas severe anxiety in the unimproved case was precipitated by seeing a crash before a single mission was undertaken.

3. *Combat Stress.*—Combat as opposed to non-combat stress is a useful criterion in distinguishing a favorable from an unfavorable prognosis. The first case well illustrates how a mildly predisposed man may remain free from anxiety neurosis under non-combat overseas service and then break down under enemy attack. Hence, breakdown under non-combat conditions denotes considerable neurotic predisposition and is accompanied by a poorer prognosis. All of the cases in the series which did not undergo enemy action fell into the group with poor prognosis for a return to useful military duty. An illustration of the point that the *degree* of combat stress is not a reliable prognostic criterion is given by Cases 2 and 3. Each was subjected to essentially the same degree of stress, yet one recovered and the other did not.

Conclusions

A series of 58 war neurotic enlisted Air Force returnees from overseas theaters routinely admitted to a United States convalescent hospital were observed for one month without specific psychotherapy.

The primary purpose was to determine which patients could be handled without specific psychotherapy and be confidently returned to duty status in an improved condition at the end of hospitalization.

The results were as follows:

1. Of the series, 26 percent fell into the markedly improved group.

2. The principal factors having practical

prognostic value in the determination of candidates for this group were:

a. Mild anxiety, in the absence of anxiety-binding mechanisms.

b. Mild predisposition.

c. Combat stress rather than non-combat.

It is therefore suggested that in convalescent hospitals treating overseas returnees with neurotic symptoms, a preliminary psychiatric screening be made by psychiatrists experienced in the diagnosis and therapy of war neuroses. By so doing a quarter or thereabouts of the patients may be legitimately treated without utilizing specific psychotherapy. The remainder will require individual psychotherapy with convalescent or occupational therapy as an adjunctive therapy.

EFFECTS OF HEAVY AERIAL BOMBARDMENT ON PRISONERS OF WAR

Clinical Note

MAJOR STEPHEN W. RANSON

Medical Corps, Army of the United States

During the morning of May 15, 1944, American bombers dropped more than 2,500 tons of bombs on the Italian town of Cassino. Never before had so much destruction been concentrated in one aerial mission. It had been anticipated that the bombing would produce many acute neurotic reactions and concussions in the German parachute troops defending the town. The author was therefore detailed to observe for such effects the prisoners taken in the infantry attack which followed.[1]

He examined some of the German paratroopers in a forward prisoner of war stockade within 4 hours of their capture. The remainder were seen in the main Fifth Army stockade, none of them later than 72 hours after capture. Formal physical, neurological and psychiatric examinations could not be made. However, it was possible to examine 20 prisoners in sufficient detail to determine the presence or absence of gross psychiatric or neurologic abnormalities. In 15 of these, abbreviated case records were made. It is felt that while the observations on which this paper is based are definitely incomplete, the theoretical interest of the subject, and the apparent absence of similar observations in the literature [2] warrant their being recorded in a brief clinical note.

Psychiatric Findings

All prisoners were composed and calm. None showed evidence of continuing fear, of gross startle reactions, or of pathologic noise sensitivity. One prisoner complained of minor anxiety symptoms, but these were not of sufficient severity to constitute a pathological combat reaction. (His case history will be given below.) Tremor was present in 8 of the group of 15 whose histories were recorded. Of these, 4 had tremor which was recorded as "slight," 3 had tremor which was labeled "moderate," and one had tremor recorded as "marked." This was the only important abnormal finding in these subjects. In summary, the bombing had produced in these prisoners no major anxiety reactions which had endured beyond capture and until the time of examination.

It was clear that some prisoners did not make frank statements. Thus, for example, certain of the subjects attempted to excuse and "cover up" tremor when it was present. Above all, they were anxious to avoid connecting it causally with battle stress.

The following cases are representative of the group:

Case 1.—*No Reaction of Importance to Bombing and Capture.*—Prisoner No. 4, a 24-year-old *Unteroffizier* with 5½ years of army service, was a machinist in civilian life. Bombs nearly hit his concrete bunker three times, but he suffered no headache, chest pain, earache or loss of composure, according to his statement. At the time of the examination, 72 hours after the bombing, he had slight light sensitivity, but declared himself otherwise symptom-free. He showed no tremor, but exhibited some acrocyanosis of the hands.

Case 2.—*Some Neurotic Traits in Civilian Life, but No Important Reaction to Bombing and Capture.*—Prisoner No. 9, an *Unteroffizier,* had been in *Wehrmacht* service 4 years. Despite near bomb hits on his bunker, he stated that he experienced no headache, earache or alteration of consciousness of any type, but had some momentary discomfort in the chest. He became "somewhat excited" at the time, but maintained composure. Seventy-two hours later, his hands were moderately tremulous, but his manner was calm, and he said that he had slept well since capture. He had been "somewhat nervous" all his life, with what he described as "a nervous heart ailment." He had tended to respond to excitement in civilian life with "heart pains," but he said that during the bombing such symptoms did not appear. He was a native of Graz (Austria), and had not been a mem-

[1] This attack did not succeed in taking the town of Cassino.

[2] It is not possible for the author to review the literature in his overseas station.

ber of the *Hitlerjugend*, but nevertheless considered himself a German, not an Austrian. He stated: "I fight because it is my duty. . . . . I am too unintelligent to question about politics."

CASE 3.—*Some Continuing Anxiety Reaction to the Bombardment, but Within the Limits of Normal.*—Prisoner No. 7, aged 20, a grocery clerk in civilian life, had served in the *Wehrmacht* 2 years. He was in a water hole during the bombing, and had inadequate cover. Although "the concussion was terrific," he said he did not lose consciousness. In the prisoner of war cage during the night following his capture, he arose in a half-sleeping, confused state, to look for his field radio. During the following night, however, his sleep was undisturbed. He had never before experienced such an episode. He stated that when he heard planes overhead, he still felt constrained to go out of doors to investigate. He experienced no unusual reaction to other noises, and showed no startle reaction. His hands were markedly tremulous. He stated that he had never noted such tremor before.

IMMEDIATE REACTIONS TO THE BOMBINGS

Many of the prisoners admitted having been "excited" (*aufgeregt*), or "shaken" (*erschüttert*), by the bombing, but none would admit having been made "nervous." Their choice of words in describing their reactions is of considerable interest, emphasizing as it does the ephemeral and nonpathological nature of the response in their eyes. No prisoner admitted having lost composure, or having seen panic in others. All emphasized the protection and sense of security given by the excellent cover under which most of them were stationed.

SIGNS OF CONCUSSION

No prisoner showed gross objective evidence of concussion. None appeared dazed or showed disturbance of gait and coordination. Not one of them complained of headaches, earaches or pain in the chest at the time of the examination. Prisoner No. 9, who had been stationed in a bunker, and prisoner No. 12, who was in a fox-hole with no overhead cover, felt some thoracic discomfort during the bombardment. Aside from these statements, there was no indication that the immediate concussive effects of the aerial bombing on the troops subjected to it, had been of any magnitude. This was no doubt due to the excellent cover in which the individual soldiers had been stationed. Neurological examinations were not performed on any of these prisoners.

INDOCTRINATION OF THE TROOPS

This group of parachutists had been well indoctrinated. They were singleminded in their approach to the war, and were convinced that, despite military reverses in Russia and the Mediterranean Theater (about which most of them seemed well informed), their command and the Führer would make the proper decisions at the proper moment and bring the war to a successful conclusion. They did not consider political subjects to be proper topics for speculation. They were strongly motivated by the concepts of duty and loyalty, and believed that they were fighting for the long-term interests of their families and their country. Typical statements by these soldiers follow: "I don't know anything about political matters. I fight because it is my duty. I cannot break my oath." (Prisoner No. 8.) "I fight because I must. . . . . It is my duty. . . . . I fight to have a normal life afterwards." (Prisoner No. 11.)

HOSPITAL RECORDS

The admission and discharge sheets of the main prisoner of war hospital serving Fifth Army were examined to rule out the possibility that erroneous impressions were being drawn from a study which devoted itself exclusively to ambulatory prisoners of war. No prisoners with diagnosis of concussion or neurosis were admitted or discharged during the period of time covered by this study. The writer was not authorized to question any of the patients in this hospital.

DISCUSSION

On theoretical grounds, the incidence of typical war neurosis in prisoners of war should be low. All secondary gain related to relief from active combat has been eliminated, and no conflict exists between the instinct of self-preservation and the call to duty. The low incidence of neurosis in this group was probably also due to the high

morale and esprit de corps of the division involved, and the excellent motivation of its members. The absence of important concussive effects was probably attributable to the excellent cover under which this group was stationed.

SUMMARY

Examination of a group of German prisoners of war taken from Cassino after the unprecedentedly heavy bombing on May 15, 1944, showed no instance of concussion or neurosis caused by the bombing.

PSYCHODYNAMICS OF CONFINEMENT OF WARTIME MILITARY OFFENDERS[1]

JOSEPH C. SOLOMON, MAJOR, MED. CORPS, A.U.S.

The imprisonment of one's fellow man for actions which run contrary to the existing social order, has been common practice since the dawn of civilization. If the practice were thoroughly without merit it would not have stood the test of time. Nevertheless, we must constantly evaluate our methods and seek for possible improvements. Categorically, confinement is confinement and it makes little difference, in theory, whether it be a civilian situation or a military one. In practice, however, there are manifest differences between military offenders and civilian offenders, and, further, there are differences between military offenders in time of peace and in time of war, and in garrison life and in the combat situation. It will not be the purpose of this presentation to describe in detail the various facets of these differences, but rather to admit their existence. The entire subject of the psychodynamics of confinement cannot be covered here in all its aspects. The observations and opinions here expressed are based only upon experience with military offenders, largely from garrison duty, in time of war. They may be applicable to the total field of penology, but the author wishes to make no such claims.

The Army employs confinement as a weapon for maintaining discipline just as civilian prisons exist presumably for the purpose of maintaining a smoothly functioning society.

There are several well-known basic principles involved. The deprivation of a man's liberty interferes with one of his most primitive human impulses. The unwelcome aspects of even the thought of being locked up loom large in the mind of every man. Man thinks he is free and as a result fights the thought of being caged. The thought of confinement is a constant threat which acts as an inhibiting or deterring force to prevent unacceptable behavior. Even if proper performance is not expressly rewarded, the feeling of freedom in the face of its possible loss is ample motivation for maintenance of one's obligations to duty in the large mass of military population. This is manifestly a negative cohesive force and should be augmented by positive motivations, but that it exists cannot be gainsaid. Threat of confinement becomes increasingly important as a disciplinary measure when morale is broken down for various reasons. As such, then, confinement acts as a whip when it becomes necessary for the leaders to set the limits and visibly carry through the punishments for overstepping these limits. When these boundaries are consistent, firm and reasonable, the use of confinement acts as a deterrent upon conscious misbehavior, and can be classified as a builder of morale.

To illustrate the concept of the establishment of authority as a means of affecting human behavior, the story of the control of opium smoking in China is of interest. A drug was used which was supposed to cure the habit. There were, of course, many failures. The therapeutic effectiveness of the drug was greatly enhanced when a decree was issued involving a death penalty for all those cases which were not cured by the medication.

Confinement of a gross offender in a military situation acts as a morale builder in another way. When there is a particularly troublesome soldier in an outfit, the contagion of unacceptable behavior begins to spread and the relationship of the officer to his men becomes endangered. It sometimes happens that meting out a sentence to the most constant offender will absorb enough of the commander's hostility to clear the air and relax the tensions in the organization. The punishment has a three-fold

[1] This paper was prepared under the Command of Col. A. M. Weyand, Infantry, the Commandant of the Northwestern Branch, United States Disciplinary Barracks, Fort Missoula, Montana. The opinions expressed are those of the author and do not necessarily reflect those of the War Department.

value. When the leader's own aggression has been gratified, he can, once more, be protective to his men. The soldiers have learned an object lesson in that unmilitary conduct is suitably punished. And, lastly, both the officer and the men feel relief in having rid themselves of a source of irritation and consequently a wholesome relationship is re-established.

There have been numerous instances where the secondary gains from unmilitary behavior have been such that the motivations for proper performance have been thoroughly lacking. A discharge without honor, the blue discharge, does not offer a serious threat to some people. They accept it readily. Such people are obviously poorly motivated, either through their own instabilities or through their lack of loyalty to their country. The fear of a period of lengthy confinement eliminates the factor of secondary gains to a greater or lesser extent, so that improper behavior does not pay adequate dividends. Confining the military maladjusted soldier has another salutary influence upon the main body of troops. It removes from circulation those individuals who are likely to undermine the morale of those who function normally.

At this point the author wishes to emphasize the need to put the military offender behind bars and fences. Were he returned to the civilian community and permitted to enjoy the benefits thereof, it is obvious that the good soldiers would be justifiably resentful and morale would be destroyed.

From the standpoint of the military prisoner, we must not look upon confinement purely as a punishment, though the original trial and sentence were geared primarily for that very purpose. We have fortunately passed beyond the point of considering prisons merely as places where society takes its pound of flesh. Uttering the cliché that the men are confined "as" punishment instead of "for" punishment bears with it the implication that other than confinement per se, no new punishment should be administered for the original offense. A good spanking is sometimes well applied therapy to the child, but it must be accompanied by all the other attributes of the parent-child relationship to be therapeutically effective. This brings us to the question of confinement as a device for actually altering human behavior. It is this principle upon which the rehabilitation center is established. It is the aim of modern penology to make confinement an experience which will prove constructive to the individual.

In analyzing the therapeutic possibilities of lengthy confinement, one finds many points that are worthy of consideration. As a general rule, it is noted, military offenses are committed when there are many tensions with distinct disturbances in the total adjustment pattern. There is frequently detected a vicious cycle in which some dissatisfaction occurs; this is followed by an act of some sort; then this is followed by punishment of a minor nature, then by more resentment and repetition of the act. In such instances a period of lengthy confinement affords an opportunity for breaking up the vicious cycle by inserting a time element which will force the issue to a climax in a setting which brooks no compromise.

A poorly adjusted soldier who reacts to his disturbance by a conduct disorder, will sometimes derive benefit by being removed from the sources of his irritation. Certainly this factor is very patent in the question of removal from easy access to alcohol. However, it is likewise true that situations can sometimes be more clearly evaluated in absentia when an unfortunate marriage or parental disharmony is interfering with the military duties. Similarly, confinement will remove men from outfits in which they have built up antagonisms and give them a chance to anticipate making new relationships.

It is a well known concept that disturbances in human behavior represent reflections of older disturbances in the interpersonal relationships of childhood. In this respect the officer-soldier relationship is a duplication of the father-son relationship, and old conflicts are accordingly stirred up. When the soldier commits a military offense, he is unconsciously acting out on some unsolved emotional need. In many instances confinement serves to crystallize and even gratify these unmet needs. The confinement situation often acts as a realistic symbol of the power of authority. In this respect the magical omnipotence which the child in-

vests in his parental authority, becomes on the one hand more powerful and more magical, and on the other hand becomes a true force which is dealt with on a reality basis. Similarly this magical power may exert its influence from the protective instinct-gratifying point of view by accepting the disturbed individual as he is, with a confidence that he will be able to attain further emotional growth.

Within the confinement situation there are different individuals who represent various components of the parental figure. The supervisor of prisoners and the compound commanders may represent the authoritative component. The psychiatrist, chaplain or social workers may represent the protective side. Each of these individuals can satisfy some emotional need. It has been found more effective therapeutically to channelize the positive, protective elements into one individual. Confidences and human relationships on this plane are more effective when they are highly personalized. The hostilities on the other hand, are more effectively handled when they are diffused. It is for this reason that intramural disciplinary hearings should be before a board of officers rather than one man. This causes a dispersion of the aggression so that the need to retaliate becomes less violent.

A period of confinement gives a man an opportunity for taking inventory of his own thinking and actions, his motivations and their consequences. The prospects of a dishonorable discharge, and the loss of approbation of relatives, friends and employers may improve his motivation. The intrapsychic readjustments through introspection represent a coordination of all the forces which are operating in the mind of the prisoner in his struggles with his environment.

In the wartime military situation, the crisis of therapeutic improvement frequently comes, when the prisoner is suddenly confronted with the manner in which he has failed to discharge his personal responsibilities to his country. This is most manifest when he receives news that a younger brother was drafted, or that a brother or cousin was killed in action. The sense of responsibility grows out of the guilt for having given way to narcissistic demands without thought of other interpersonal values. The intra-psychic readjustments are favorably effected when unconscious motivations are brought into consciousness. Prolonged individual psychotherapy would be ideal, but is not often feasible. However, use may be made of direct interpretations in a few interviews which can give the prisoner food for introspection for many months to come. Group psychotherapy can operate in the same direction. In group treatments the individual participants can obtain material for introspection out of the aëration of their own problems and listening to the problems of others. Other factors involve the transference and identification with the leader and the identification with the other inmates.

This question of identification is one of the strongest therapeutic factors for emotional growth. The offender generally suffers from the fact that he has not made any healthy identifications. In a confinement situation there is the opportunity of making identifications with the others who are similarly striving for improvement and with those in authority with whom he may have meaningful relationships.

An occasional prisoner makes an adjustment on a religious level. In such instances the omnipotence of God becomes the protective force and a new pattern of behavior results. Such an eventuality is particularly salutary in the case of alcoholics. It is a known fact that psychiatry often fails miserably in such cases. Even if it means substituting a religious neurosis for the former one, it can certainly be looked upon with greater favor from the social and military point of view.

Although the foregoing therapeutic influences are operative, there is no cause for undue optimism as to favorable results. On the other hand it is also necessary to consider the possible destructive effects of confinement. A few of these forces will be mentioned. The factor of timing is extremely important. When a man is kept in confinement after the peak of his improvement has been reached, much of the value of the experience will be lost. Although such a person may continue to be an ideal prisoner, he may never again be capable of normal social adjustment. It is because

of this factor of timing that prisons employ the medium of home parole. This procedure has been proved highly effective in modern penology.

Confinement sometimes increases hostility to authority, thereby accentuating the vicious cycle previously described. In such instances the offender merely accepts confinement as another proof that he is not loved or trusted, and that everyone is against him; he feels that he is on one side of the fence and the world is on the other side. He refers to everyone outside of himself as "them" or "they." This elusive "they" are those who would harm him. That this concept of "they" and "them" is but a transparent extension of paternal symbols, can be easily discerned by study of the personal histories of the men. It is a form of paranoia which is present in many of these unstable people in varying degrees.

When the confinement situation fails, not only has the man not made healthy identifications, but he sometimes makes very unwholesome ones. When the barrier between the insecure "I" and the elusive "they" is too great, as occurs in the chronic offender, he is drawn only to those whose unsocial tendencies are likewise strongly established. In this way the social misfits fortify each other's hostilities and fears of normal society.

If the confinement itself has not been adequately handled by the officers in charge, it can be a destructive experience. In some instances, fortunately very rare, therapeutic success could have been attained, but was not, because all the salutary influences are not coordinated; for example, when proper performance was not praised or rewarded, or where unjust punishment was meted out. Such a situation can turn the balance in the direction of destructiveness instead of emotional growth. Penology is a business in which the Army has heretofore not engaged on such a large scale. Most of the officers and overseers are soldiers and have not been especially trained for prison work. In actual practice the civilian penologist cannot carry over completely his methods of operation into the army situation. The problems in a wartime disciplinary installation are patently different. The average enlisted man or line officer must make many new adaptations and learn the techniques of handling military offenders. Leadership of the normal soldier is a difficult task. Leadership of the unstable offender is a skilled profession.

Another factor which can operate in modifying the thinking of the prisoners in a negative direction is the intensification of their problems by separation from friends and relatives and by the increase of financial burdens to the family. It is true that worry about such matters sometimes helps the individual in his relationships as was pointed out previously; but in a certain number of insecure inadequate individuals it serves to overwhelm them still further. This has been particularly manifest when the hardships to families impinge strongly upon their consciences.

A very important destructive influence of lengthy confinement is based upon the failure to provide normal outlets for the sexual drives. Repressive forms of sexuality, active or passive homosexual relations, often preclude the prospects of normal sexual adjustment in the future. The most tragic situation of all is the traumatic effect of forceful submission to perverse practices by youthful offenders at the hands of ruthless, aggressive psychopaths. Even the aggressive individuals have some homosexual features. They show dependency reactions upon their mothers as do many overt homosexuals, and in confinement often give way to all sorts of sexual aberrations, usually with a humiliating or hostile feeling towards their sexual partners.

It was pointed out earlier that fear of confinement is a stabilizing influence upon most people. When some men find themselves confined, however, and have already lived through the experience, this fear no longer acts as a discipline. Individuals who have learned how "to do time" do not profit by the experience. Such persons have built up their ego defenses to such an extent that confinement does not make much difference in their makeup. If anything, the former behavior patterns become more firmly fixed.

Often the so-called severe psychopath seems to be entirely untouched by the experience of confinement. This type of individual is not fighting parental authority. To him it does not even exist. His person-

ality is one of a hedonistic instinct-gratifying nature without concern for the welfare of others. He is thoroughly individualistic and is comparatively unaffected by external situations. His personality was so altered during early years by restrictive forces that he no longer reacts to confinement. One is prone to say that he does not "profit by experience," nor "benefit by his mistakes."

On the other hand, perhaps no one is entirely unaffected by confinement, and one could say that the one major emotional reaction to confinement is one of depression. There is little happiness in the loss of freedom, the disgrace of a dishonorable discharge, and the guilt about letting down one's country in time of war. It is only the most calloused individual who is entirely unaffected.

Perhaps the type of individual who is least affected by confinement is the social or religious deviate who is punished for taking a definite stand along certain emotionally-bound lines. Confinement to him is a sort of martyrdom. It is an identification with historical or Biblical martyrs and as such is neither constructive nor especially destructive.

There are some well-integrated individuals who are not particularly hurt by the experience and probably not especially helped. Such people may be serving sentences for accidental or situational crimes. A feeling of relief from the guilt emanating from his actions may take place. After that it is merely a question of a mature adult making the best possible adaptation under the circumstances.

What the Army calls undesirable performance and what society calls unsocial behavior can be looked upon as a disturbance in human character. There is a growing trend to discard the term *psychopathic personality* in favor of the designation *character neurosis*. This term implies fixed behavioral abnormalities in contrast to the term *symptom neurosis,* which refers to the psychoneurotic group. Looked at from the point of view of human relations, the individual with a character neurosis is no problem to himself but is a problem to society, whereas, the individual with a symptom neurosis suffers acutely himself but does not directly disturb society. The one may be considered aggressive action against people, while the other is a submissive suffering at the hands of the world. The Army recognizes the psychopath as one who is showing distorted actions, whereas the psychoneurotic is one who is suffering from distorted thinking. That the two phenomena are reciprocally related needs no corroboration.

From the foregoing it may be concluded that the major consideration in the psychodynamics of the confinement of military offenders is the determination whether movement in the intra-psychic reorganization is taking place. If it is, it must be determined in which direction—constructive or destructive—the organization is moving. Abandonment of diagnostic labels upon the so-called psychopathic group gives greater latitude in evaluating the men from a dynamic point of view.

With the knowledge that human personality may be looked upon as possessing a flexible quality, the therapeutic program must be geared along mobile lines. At present the therapeutic program in our disciplinary barracks leaves much to be desired. The Army, however, has been a leader before in new advances in penology. Methods introduced at Fort Leavenworth in the last war, for example, were copied by civilian institutions.

It is obvious that individual psychotherapy cannot begin to scratch the surface for meeting the many problems of a disciplinary barracks. The only workable solution is to deal with the inmate population as a whole and in its various component groups. The subject will be discussed from the following aspects: (a) discipline and training, (b) satisfying the instinctive needs, (c) the acceptance of responsibility.

Discipline must not be looked upon purely from the point of view of a smoothly running organization. Many well-disciplined institutions present no problems in management because of the intimidation of the inmates into obeying set rules. Yet this alone does not signify that the men are going to remain perpetually disciplined after leaving the confines of the place. It is necessary to set the limits, no matter how rigid, and to remain thoroughly consistent about these

limits. When the men are adequately informed as to their limits and are suitably punished for overstepping the mark, they can make their adjustments accordingly. Unbridled instinctual expressions may be satisfying to the individuals concerned, but they are unrealistic as far as the demands of society are concerned. In a military disciplinary barracks the discipline must be at least as exacting in all respects as in the Army in general. Even though a large percentage of men may be returned to civilian life, the aim of being a good soldier must be kept in the forefront as an ever present goal.

It is the hope of many disciplinarians that if a person lives in a disciplined situation long enough, he will develop a pattern of performance that will become a part of the character structure. It has been found that this mechanism only operates successfully in a group of over-protected, undisciplined individuals who have had an unreasonable gratification of their demands without understanding the limits of society. Such cases are quite rare. Most of the cases do not respond to discipline alone. They need understanding. This understanding, however, must be offered in the framework of a closely disciplined authority.

Training means learning. This implies that the individual must learn what constitutes normal behavior and it also implies that he must learn a skill. As to the latter, much emphasis has been given by workers in the prison field for teaching trades and for providing some basic education. This is important but it is not the whole program; individuals with many skills and good education can still be decidedly unstable socially. It is a hollow achievement to give a man a skill only. Unless he has developed desirable character changes, he will not use that skill as a useful citizen.

A self-imposed discipline based upon the unpleasantness of loss of freedom occurs to some extent in all individuals who are placed in confinement. But when a man states that he has "learned his lesson" or that from now on he is going to "fly right" merely because he hates confinement, this need not be looked upon as genuine therapeutic improvement from the psychiatric point of view. In many instances it merely represents the repression of symptoms with the basic need still unsatisfied. Such individuals are likely to again commit offenses or else they may become submissive individuals with a variety of somatic symptoms to replace their outward aggressions.

Discipline alone is obviously not the answer. Most of the problem soldiers have been problems in civilian life. Their histories show a predominantly large number of broken homes and parental rejection. They have grown up in an atmosphere of insecurity. The social features lacking—affection, home attachments and protection—are difficult to supply, but encouragement of families to maintain their interest in the inmates may prove useful in establishing some anchorage and sense of belonging.

Individual psychotherapy can be a highly effective instrument in confinement. Men who would never consult a psychiatrist in the free world respond readily to the professional interest which may be shown them when they can no longer solve their conflicts in their own ways. These men are suspicious of people, but they do not voice their suspicions. Giving them an understanding of their suspiciousness and making some attempts to understand their reasons for being suspicious serves oftentimes to establish a workable transference. One of the most unstable criminal psychopaths ever confined at our station told the writer: "If you were my commanding officer I would never have messed up. You should be a major general." This, of course, was but a transparent way of indicating his need for identifying himself with a suitable paternal symbol. It is an obvious transference phenomenon.

The psychiatrist should at all times represent, as does the chaplain, the protective, gratifying force in the institution. He should not be looked upon by the inmates as one who pries into their lives or one who tries to extract information that will later be used against them. Unfortunately case histories do condemn the men. If, however, the inmates have gained some insight into themselves they do not resent having imparted the information. The more actual benefit the man receives from his interviews, the more he is willing to disclose about himself.

When historical data are coordinated to make meaningful interpretations the men realize that unburdening themselves will work to their advantage. Interpretations should only be on an ego level with a scrupulous avoidance of id material. If sensitive material is too loosely handled the defenses are brought into play and the opportunity for having established a workable relationship may be lost.

The positive transference manifestations are not necessarily limited to the psychiatrist. Overseer, compound commanders, and other officers can each be important to some of the inmates for having rendered a friendly service individually or to the group. Rewards are always more effective than promises.

Group psychotherapy, mentioned earlier as a constructive factor in confinement, has engaged the interest of psychiatrists recently. This method of treatment is comparatively new and there is no set agreement as to technique or as to its effectiveness. The whole subject was covered by the author in a previous publication(1).

As an outgrowth of the group sessions and from conferences with Col. Weyand and Lt. Col. Bruscas, commandant and executive officer of Fort Missoula, respectively, a program for the improvement of the method of restoration is being offered. This program will be discussed from the point of view of the third point above mentioned, namely, the acceptance of responsibility. For the men who have not been recommended for restoration this subject is left in abeyance. It is not to be ignored. The only points worth mentioning are those of suitable job assignments and placing the men on local parole. For the men who are going back to duty, however, the Army must be very deeply concerned; the question of the fighting effectiveness of the restored prisoner and the effect upon the morale of the other soldiers of his unit is involved.

At present the policy of restoration varies to some extent in the different disciplinary barracks and especially in the rehabilitation centers. The training program at Fort Missoula covers a 3-months period in the disciplinary company. Men are not assigned until they have been recommended by the psychiatrist, the psychiatry and sociology Board and the commandant and approval has been obtained from the War Department. The men live in a closely disciplined situation but are accorded some privileges such as attending the movies and messing with the enlisted personnel. This latter has proved to be one of the most salutary influences in the readjustment of the inmates to true military life. There have been reported instances from other installations where the restored prisoners have taken out personal grievances against their former guards after their restoration. Such things do not happen here because the men are granted an opportunity for fraternization while they are still in the status of prisoners. This practice is recommended as standard procedure.

The opportunity for getting into trouble should not be denied the inmates who are about to be restored. If a prisoner is alcoholic or shows unstable traits in other ways it is better to find it out while he is still a prisoner than after he is restored to duty. The disciplinary barracks do not operate under the plan of restoration with the sentence remaining in suspension. If a man is restored to duty he is in all respects an honorable soldier. When a man in the disciplinary company reveals that he cannot be a good soldier he should be returned to the regular inmate population. He should, however, be given an opportunity for a hearing before a disciplinary board before such action takes place.

The training program must be flexible enough for adequate evaluations as to the readiness for restoration on a reality testing basis. Although 3 months in the disciplinary company is considered a suitable time for such assignment, the program need not be thus limited. Some men may be ready for restoration in that time; others may require 6 or 8 months. During this period there must be a gradual assumption or responsibility, progress being accompanied by relaxation of the restrictions. The program should be so geared that by the time the men are restored to duty they will have been living for some time the lives of normal soldiers, so completely identifying themselves with the other soldiers that the thought of being prisoners is far from their minds.

If such a program were in operation there

could be more liberal policy of selecting men for restoration. Each would be given the acid test of his readiness to restore. No change need be made in the method of selection but greater emphasis can be laid upon the stabilization of formerly unstable people so that the constructive factors of confinement can be adequately utilized by the Army. It should be a cardinal principle that when a man gets into the disciplinary company he will without question be restored to duty unless he displays a poor attitude to discipline or his acts are such as to discredit him. Following his course of training he should be given a furlough. This policy is practiced at this station as it is at other disciplinary barracks. It is highly desirable motivating force to proper behavior.

CONCLUSIONS

The psychodynamics of confinement of wartime military prisoners was discussed. The constructive and destructive factors affecting the men were mentioned. The abandonment of diagnostic labels has enabled the psychiatrists to look upon the military offenders from the point of view of dynamic formulations which are capable of change as the situation demands. Finally, some suggestions were offered for therapy and for preparing the prisoners for restoration to duty.

BIBLIOGRAPHY

1. Solomon, Jos. C., and Axelrod, Pearl. Group psychotherapy for withdrawn adolescents. Am. J. Dis. Child., **68**: 86-101, August 1944.

NEUROSIS AND GROUP MOTIVATION

MARTIN H. STEIN, CAPTAIN, M.C., A.U.S.

The importance of neuropsychiatric casualties in the Army is something which goes far beyond the actual number of patients who are treated as neurotics, or who are lost to combat. The statistics we have measure only the men lost with this diagnosis; they do not take into account the intangibles, the inefficiencies, the demoralizations, the group confusions and panics, the disciplinary infractions, which are parallel problems.

For this reason, any discussion of military psychiatry must necessarily be part of a larger discussion of military efficiency. The psychiatrist must be aware that while he is the expert who is primarily interested in the development of clinical mental disease, he is also part of a much vaster program which is directed toward making the Army fight better.

It is not the psychiatrist's place to prescribe conditions of combat, or even training or personnel management; but he does have one skill which may be of considerable value to the Army in an analysis of military efficiency. It is possible by observation of the sick to deduce a good deal about the state of the healthy soldier. Moreover, a knowledge of the dynamics of the neurotic soldier does give the opportunity to draw conclusions concerning the effect of battle on all soldiers. It is dangerous, of course, to judge all soldiers by neurotic casualties; but properly done, the analysis may be highly valuable, since the important dynamic processes in all soldiers in combat are basically similar, though varying in degree and importance.

As we have gained more experience, we have become more and more convinced of a single, at first discouraging fact: that when a neurosis became well developed in combat, the soldier's future usefulness as a fighter was permanently limited. For this reason we have become more interested in the other side of the problem, that of prevention of the neurosis. Fundamentally, this is a larger field than treatment, and a more productive one, for neurosis can be prevented, just as it can be precipitated. Moreover, since a study of the problem involves basic questions of military efficiency, it may be possible for psychiatry to contribute to this larger field.

In discussing prevention of neurosis, it is necessary to limit the field rather sharply, defining exactly what can be accomplished. There is no doubt that the primary cause of neurosis in combat soldiers is actual exposure to battle itself, to the threats of death and mutilation, to danger and hardship. It may as well be accepted that these conditions are fixed, and that tactical situations will often demand heavy casualties.

A second factor in the development of neurosis is the previous personality of the soldier, the thoughts, emotions and behavior patterns developed throughout his life, which he brings into the Army with him. Screening at induction and at replacement training centers has done much to eliminate the severe neurotics, those men who are from the first completely unfit for combat. It cannot, and should not, do more than that. This leaves, therefore, a very large group of healthy individuals, and a smaller group who have well marked neurotic traits. These men are fit for duty, but a certain proportion of men will develop neurosis in combat under anxiety producing conditions. The healthy individuals will show more resistance to that development, but they are far from immune. Our experience has been, in the past years, that only a relatively small percentage of neurotics we see in combat units could have been rejected at induction, or for that matter, should have been. It is quite clear too, that the soldier's premilitary personality cannot be essentially altered by us. The Army has neither the time nor the personnel to engage in the prolonged and intensive psychiatric procedures which would be necessary for any such program. Moreover, the results would be very questionable.

What is left then, after eliminating the possibilities of altering combat itself, or the personalities of the men exposed to it? What remains in the whole complex of attitudes, beliefs, feelings and behavior patterns is known

as "morale." Morale is the individual's feeling toward his group, his degree of identification with it, and the group's feeling about itself. Its primary effect is to determine the military efficiency of that group—whether it is a squad or an army. That morale can be actively influenced by deliberate measures is beyond doubt. It is not fixed. It can be built up, and it can be destroyed.

The importance of group morale in the prevention of neuropsychiatric casualties is not easy to prove by statistics, because of the many variables, and the difficulty of measuring morale mathematically. That neuroses tend to occur more rapidly in demoralized units is a common observation. An example, one of many, is cited, of the sudden occurrence of a large number of acute neurotic reactions in a single company. These followed the self-wounding of the commander, during combat, resulting in demoralization of his unit.

The neuroses which develop in combat display certain dynamic phenomena which emphasize the paramount importance of the individual's relation to his group. It is in this respect, as well as in their repetitive and highly traumatic setting, that they differ most sharply from neuroses commonly seen in civilians (Weinstein and Drayer (1)). It is probable that most soldiers labor under an increased load of anxiety, even when not exposed to combat. This is borne out by clinical observation, as well as by Rorschach studies (Linn(2)).

In combat, the soldier is exposed to a series of powerful stimuli which produce anxiety, chiefly by threatening life. He suffers anxiety in some form most of the time. Generally, he is able to deal with this in an adequate and economical way, permitting him to continue to function as an effective soldier. While disposing of this anxiety may result in some loss of energy, he is still possessed of enough to go on with his duties. When, however, his anxiety rises to intolerable levels, when so much of his energy is required to deal with it that he becomes ineffective, he has become clinically neurotic. The combat induced neurosis is, by this standard, an illness which results from anxiety, and which is measured in terms of loss of effectiveness due to that anxiety.

The rise of this anxiety to incapacitating levels is by no means inevitable, nor is it regular in its course. When anxiety mounts, the individual reacts in a predictable way. He experiences discomfort, which, if prolonged or intense, leads him to develop hostility toward the source of the anxiety which tortures him. If he reacts in a healthy fashion, his hostility is expressed toward the real author of his difficulty, the enemy. If possible, this takes the form of more intense efforts to destroy that enemy. When he is thus able to react to his anxiety and the hostility engendered by it, by effective aggressive action, he has employed a desirable means of disposing of his feelings. There is, therefore, no new reason for an increase in his anxiety. He has acted, meanwhile, as an effective soldier.

Whether he can function in this way depends upon what means are at his disposal to combat anxiety by proper and effective action, action which implies the ability to express aggression in a desirable fashion. It depends, too, upon those resources which make it possible to endure anxiety. Both the capacity to express oneself in effective action in modern warfare and to endure anxiety, involve identification with a group. The individual rifleman cannot, as an individual, act against the enemy artillery which precipitates his anxiety; nor would he endure it, were it not for his loyalty to and dependence upon his fellows. This capacity for adequate expression involves more; the ability to direct hostility in an active fashion, hostility which has as its immediate goal the destruction of the enemy.

These abilities, first to identify with a group, and second, to express hostile drives effectively, are interdependent. The individual who forms healthy attachments to his company, division and to his nation, directs his hostility toward those forces which threaten it. The individual who is able to direct all of his hostility outside the group, is facilitated thereby in his identification with it.

The neurotic, on the other hand, finds himself unable to identify with the group in a healthy fashion. His group as well as his individual attachments are marked by overdependence and overconformity, or on

the other hand, by rebelliousness. Most often, his identification is highly ambivalent, and subject to sudden changes from devotion to enmity, when he feels disappointed or temporarily isolated. His loyalties are too often highly personal. This relationship is dangerous by itself in any combat situation, complicated as it is by the involved nature of the neurotic attachment, laden with dependence, devotion, jealousy and guilt.

The group, and the authority which it possesses, are to the neurotic a source of strength and fear. It is something to depend on, a source of comfort when the situation produces anxiety, and even an outlet for sublimated drives arising from inner, personal conflicts. His guilt and hostility may be expressed by highly effective combat activity. But his ambivalent relationship with the very group of which he is a part, his hostility toward that authority which supports him, places him under a considerable handicap, which most often reduces his combat effectiveness well below average.

The process of development of incapacitating anxiety in combat is qualitatively the same in the previously neurotic and the healthy soldier. It is simply a more rapid and more malignant process in the neurotic individual; but it does occur in healthy average soldiers as well. It is precipitated when the soldier finds himself in a situation which remains intensely anxiety-producing, but which permits of no prospect of aggresive action; most often it marks a change in the soldier's relationship to his group. This alteration occurs when as the result of heavy casualties, he is led to feel that his group is no longer capable of protecting him, that it is weak, ineffective, badly led or inimical to his own welfare. Frequently, it follows a weakening of group ties by physical separation, generally by prolonged hospitalization for any cause. Instead of feeling himself part of a company, he has now become a lonely, frightened individual, forced to protect himself in other ways.

At the same time, his hostility is expressed neurotically—that is, not against the object really responsible, the enemy who may fire back, but against the forces who in his eyes were more immediately at fault for his present plight. These are his immediate superiors, higher commanders, the Army, the nation, even our Allies. This rise in hostility toward the group and its authority, toward the only forces upon which he can depend for security, involves without fail a further increase in anxiety. This pattern, a vicious circle of anxiety and hostility, fixes the neurosis and disables the soldier.

In the neurotic, the sense of separation from the group occurs much more rapidly because of the ambivalent and flimsy nature of the relationship. For similar reasons, because a pattern of diffuse and misdirected aggressive drives has already been set up, hostility serves, not to produce effective action, but rather to rebound upon authority, to produce more anxiety, and frequently to reopen old conflicts.

This disruption of group relationships marks every neurosis which arises in combat. It may be manifested by withdrawal from one's fellows, and irritability, by increased hostility toward authority, and most frequently by a type of thinking and feeling about one's group which is characterized by catastrophic or negating expressions, *e.g.*, "The platoon was wiped out," "All my buddies are gone," "The outfit isn't what it used to be." All of this is accompanied by hostility, often toward the higher authorities who ordered the soldier into combat or who planned the battle, rarely toward the enemy. Sometimes hostility is directed toward the individual himself, as guilt; in this case his attitude toward the group is that he has betrayed them or that he is unfit to lead them. How the group relationship is disturbed, and how hostility expresses itself, whether toward authority, toward oneself or as diffuse rage, depends to a considerable extent upon the previous pattern of the personality. In any case, once this development has taken place, the soldier has become ineffective.

Since the development of neurosis is so dependent upon loyalty to and identification with the group, and the proper expression and direction of hostility, these points are the key to its prevention. For that reason, any program which is directed toward the prevention of neurosis should be judged by these standards: first, how much does it encourage group identification, and to what groups; second, to what extent does it direct the soldier's hostility into proper channels.

It is worth emphasizing that the attainment of these objectives accomplishes more than merely hindering the development of neurosis. All of our studies of AWOL have led to the observation that the average AWOL is not a neurotic, but he is a man who differs from the good soldier in one important respect. He is never completely identified with his group, nor does he form strong attachments within it. When he acts, he acts logically as an individual. He leaves combat because he is interested only in preserving his own life; group loyalties mean little to him, and group punishment short of death means equally little. Any program which will make these men more loyal to their group, more dependent upon it for emotional security, and more afraid of its bad opinion, may be expected to have a beneficial effect on the incidence of AWOL.

In the same fashion, it may be anticipated (and this is standard military doctrine) that a program which improves functioning as a member of a group, which fosters group loyalty and responsibility, makes a good man a better combat soldier. The soldier who feels that he is a part of an effective group, a group which is protecting him, and whose interests are identified with his own, is a far better fighter than a man who fights only for self-protection. Moreover, the soldier who expresses his hostility against the enemy habitually, and when he is anxious, rather than against his leaders, is a far better soldier for that fact.

It is evident that any far reaching program directed toward the prevention of psychiatric casualties must be closely related to the equally important problem of AWOL, and the even more important one of increasing combat efficiency. The usual criticisms of any such program are first, that it destroys individual initiative by making the soldier into a robot, unable to act effectively by himself; second that the arousing of hostility toward the enemy has undesirable effects on the soldier's character, and is fraught with danger to his future behavior as a civilian.

The inculcation of a healthy group spirit certainly does not destroy the soldier's ability to act adequately as an individual; it rather fosters it. Those people who are the best adjusted in their own individual and family ties make the most effective larger group adjustments as well, and are the best soldiers in combat. It is safe to say that really good military discipline does not destroy initiative, but allows the individual soldier to direct it into channels which are beneficial for the group. Thus impelled, he uses the same initiative to devise a way to save a comrade, to destroy the enemy, to make himself useful to his group. It is pertinent to remark that good soldiers, in this sense, make good citizens.

The second criticism, that of the danger of arousing hostility toward the enemy, ignores an important principle. Grinker(3), for example, recommends that "propaganda for hatred of the enemy should not be employed, since such hatreds eventually become self-destructive." Any program of indoctrination does not create hostility; it merely provides for its direction into proper channels. Even Hitler did not primarily create hostility; he directed that considerable amount already present into channels useful for his purposes. Hostility exists in every individual who is anxious or threatened; it is especially prominent in soldiers with combat experience. It makes itself evident whenever they are frustrated or unhappy. It is created by war, and it is undesirable only as war is undesirable, and avoidable only as war is avoidable. Once it is present, it is necessary to direct it, to allow it to be expressed in such ways that it will do the enemy the maximum of harm, and thus, for the period of the war at least, be a useful force. Hostility should not be confused with rage, which is powerless and without purpose. Well directed hostility is capable of much constructive work, most of all in the soldier. Hostility which is ignored and allowed to become diffuse is highly destructive, not only to the individual but to his group.

The program for preventive psychiatry must therefore be based on these two goals: group loyalty, and proper expression of hostility. The first goal, that of identification with the group, is the one toward which most progress has been made so far, and is the one usually thought of as "morale." Since it is a fighting group we are discussing, the term morale becomes synonymous with the soldier's willingness to *fight* as a member of a group.

Many of the methods which are useful

to attain this purpose are well known and have been used by armies long before psychiatry was ever considered. The training of recruits, and even of older soldiers, has always had, at least since Roman times, pride in the unit as one of its chief goals. This was the purpose of having battle flags, standards, unit citations, and similar measures. Moreover, in his training, the new soldier is taught, often mechanically, that it is better to be coordinated with others, that there is a pride to be taken in the ability to operate in groups, that it is less fatiguing to march in formation. It is certainly possible that more could be done in this respect to *explain* to the soldier what value this has for him, because all too frequently such training is met with resentment.

The American soldier, under favorable circumstances, identifies very rapidly with his immediate group, the platoon or company. He makes friends within it, he suffers its hardships and benefits by its privileges. Practically every soldier develops an attachment to a buddy, a relationship which sustains him in danger, and which gives him his first lessons in group activity and individual sacrifice. Buddies are often killed, however, and more often wounded or removed from the scene in other ways. In this case, the soldier who has no broader ties finds himself lacking any support, and is very likely to develop great anxiety. The average soldier can, however, identify sufficiently with his company to carry on.

To a less degree, the same is true of those men who have developed a firm attachment only to their companies. So long as the company remains a unit, they have something to sustain them; when it is decimated in combat, or when they are separated from it by wounds or illness, this attachment too loses its value.

Because of this, there has been a very definite attempt to inculcate a wider range of identification, to include the regiment, division and army, units which are relatively indestructible. This has value in proportion to the size and permanence of the unit; and it has been successfully fostered by such methods as distinctive insignia, newspapers and rest camps.

Underneath all this is the need to have the soldiers regard this group, whatever its size, as powerful and good. He must look upon his company, or his army, as a group which is powerful enough to accomplish its mission, to protect him, and to appreciate him. He must feel that the mission of the group is *his* mission, and that it can and will be carried out.

Probably the most elementary requirement in all of this is leadership—leadership particularly at the level where the soldier can see it and feel it. The platoon, company and battalion commanders do not merely represent the leadership of the unit. They represent, rather, the soldier's idea of authority and leadership in the Army as a whole. The company commander is sometimes described in manuals as the soldier's "father." This is a sound analogy, because he is, to the soldier, the most immediate person of great authority. For this reason, there have been many examples in combat of high neurosis rates occurring in single companies which had conspicuously poor leadership; and similarly, low rates in others which had unusually good commanders.

The fact that this is not purely a *personal* attachment (except in the case of previously neurotic soldiers) is indicated by the finding that when a good company commander is killed, his company continues to function *better* under a new commander than a unit which had been badly led before. Good junior officers, therefore, have an influence which goes far beyound their personal relationships.

The company officer's ability to prevent neurosis depends upon the same qualities which make him an effective combat leader, not upon any special psychological training. Neurosis cannot be prevented by talking soldiers out of it; it can only be prevented by leadership which makes it unnecessary for it to develop. There are innumerable ways in which this operates—from the first principles of good discipline (which makes the soldier believe his group is fair and just), to the demonstrated ability to function well in combat (which makes him feel it is powerful). He has many other functions as well, which will become evident as other aspects of the subject are discussed. In any case, the company officer is the key to morale in the U. S. Army. The importance of his attitudes, his behavior and beliefs, is obvious.

This does not imply, however, that other

and wider factors are not of great importance in this respect. The functions of higher echelons are obvious in the attempt to produce wider identifications. A regimental privilege, or an army rest camp, have definite functions in reminding the soldier that he is part of something bigger, that this larger unit is powerful, and that it is looking out for him. There is no doubt that this program has had considerable success, and that it is equally sensitive to leadership in the various echelons.

There is, however, much more to be done. The soldier who fights only because his company or division fights, with no further ideas about it, may react with anxiety and resentment when those units suffer inevitable casualties, and when he himself is exposed to anxiety producing situations. It is necessary on all counts to encourage not only immediate identification with company, regiment, division and field army, but with the Army, and with the American war effort as a whole. The soldier who is able to make this wider identification has further protection from anxiety because he feels himself to be a member of the most powerful group in the world, a group which supports him, and for which he fights, and a group whose larger interests are his own. In addition, when he does develop hostility, instead of directing it at American (or Allied) groups, such as civilians, the draft board or other groups, he will direct it where it belongs—at the common enemy. There is little doubt that this can increase his effectiveness as a soldier; and it is our firm belief that it can have only a good effect on the incidence of neurosis.

That this is a tremendous job is undeniable; that it cannot be completely accomplished in the time and with the facilities available, is also true. But it has been begun, and everything which is done in this direction is highly valuable. It should be emphasized that we are not trying to make bad citizens into good ones; it is merely a matter of improving the group feeling already possessed by the average American.

It is possible to foster this widest and most important of group relationships by an instrument which is already available—information. The desirability of Allied victory, and its necessity, from the point of view of the citizen-soldier are sufficiently clear. It is unnecessary to employ propaganda, in the usual sense of the word. The lines are clearly drawn between the world of the United Nations, and world of the Axis. The average American soldier, given the facts, is capable of understanding them.

The Army has already embarked upon a program which has as its objective the presentation of these facts in an interesting and clear fashion, through the agency of the information-education service. While it may be impossible to measure any distinct drop in the neurosis rate ascribable to this program, the results have become evident in other ways. It is certainly our impression that the average soldier is better informed now then he was two years or a year ago, that he feels more strongly the necessity for our victory, and that he has more understanding of his own place in the war. Even the neurotic is less likely to blame his commanders or our strategy for his discomforts. It is our experience, too, that all soldiers, healthy and neurotic, will accept such a program when it is skillfully presented. A "war picture" produces revulsion in soldiers, not because it is about the war, but rather because it is pointless or inaccurate. Even most neurotic patients willingly attend and become interested in the superior type of documentary film which has been made available, in spite of its obvious anxiety-producing qualities. It gives some comfort to know that one has suffered for the attainment of a worthwhile goal. But the important field of endeavor for all these measures must be the *healthy* soldier. He is still capable of normal and strong group loyalties, and of expressing his aggressive drives in such a way as to destroy the enemies of his group. The program is successful in the degree it fosters these patterns with respect to the Allied war effort.

This leads to certain conclusions concerning the value of various types of group appeals and emotional drives. Some are doomed to failure by their lack of inclusiveness, a defect which may lead to some group identification, but which allows the development of serious hostilities within the effective fighting group itself.

Efforts to direct hostility toward the Japanese on the basis of their race and color

may have some fleeting value, a value which is completely lost when the soldier finds himself a member of an extremely mixed group, fighting, perhaps, against Germans who look like the people of his home town. Only hostility which is directed toward the political and social aims of the enemy avoids this impasse; and only group identification which includes *all* groups of good will and similar war aims is likely to be really effective in the widest sense.

This discussion does not imply that other means of fostering group motivation are any less effective. The value of physical conditioning is well known, for itself; but it should also be thought of as a further means of elevating group identification. The same is true of combat training, which has tremendous value, not only in its fostering of individual confidence and efficiency, but also in its stress upon the functioning of the individual as an important and effective member of a group.

Popular presentations of the dynamics of fear are certainly valuable, particularly for commanders; but insight alone is very little protection for an anxious soldier who needs strength.

One final criticism of the program is based upon the observation that among the best informed and motivated individuals, one may discover an unduly high proportion of neurotics. This high proportion is rather a reflection of the fact that the average standard of information in the group is still far from high. The well-informed individuals are, therefore, deviants from the social norm. In many of them, an interest in world affairs is a response to chronic anxiety, rather than a manifestation of an active interest in the environment; in others, political interest results from chronic distrust and hostility toward any authority. When, however, this general standard of information is elevated, or the group tested is superior in intelligence, this observation is reversed.

It has been our experience, moreover, that the well motivated and well informed neurotic is far more effective in combat, and in the military service generally, and is more responsive to therapy, than the much larger number of neurotics who are indifferent to the war effort. In general a neurosis makes it more difficult to develop effective group motivation.

There is little doubt that at any stage of group motivation, some soldiers will still develop neuroses in severe combat, just as some will desert. But it is possible to reduce their number significantly below the present one. The factors which influence group motivation are the most effective instruments for this purpose.

Summary

It is impossible to make combat itself any less dangerous or pleasant. It is also impossible to improve to any great degree the inherent emotional stamina of our manpower. It is feasible and essential, to prepare men emotionally in such a way that their reaction to combat will be better. This emotional preparation is "morale."

Neurosis develops when anxiety reaches such a point that it requires most of the soldier's energy to fight it, and it interferes seriously with his ability to fight the enemy.

The development of neurosis in a given combat situation depends upon the extent to which the soldier has become part of his group, also the direction and effectiveness of the hostility which is aroused. Resentment and hostility are present in every soldier, particularly when he is under stress. If they are directed toward the enemy in the form of effective action, he can function as a good soldier, and is less likely to develop more anxiety. If they are misdirected, or cannot be expressed, excessive anxiety develops, and may be disabling.

Good morale protects the soldier from anxiety, first, by offering him the protection derived from group identification, and second, by directing hostility into proper channels. It does not produce hostility; it merely directs that which is already present.

The primary step in good morale is the establishment of superior leadership, particularly at the company level. Identification with larger military units, such as the regiment, division and field army, are desirable because of their greater permanence and power, protecting the soldier when smaller units are disintegrated in combat.

It is essential to inculcate loyalty toward

larger and more stable groups, toward the Army, the government, the nation and the Allied war effort. This program, based largely upon furnishing information to the soldier, when skillfully presented by able officers, has been accepted by the soldier, even by the neurotic soldier. It has been especially useful in directing the hostility already present into proper channels, away from command, authority and allied groups, and toward the enemy.

Psychoneurotic casualties will eventually occur in combat no matter how good the group morale may be. Nevertheless, high morale will delay their occurrence and lower their expected incidence.

Finally, it is our contention that a soldier who is well led, knows why he is fighting and believes in the necessity for fighting, will not only remain on the line longer and fight better, but will be less likely to be disabled by neurosis.

BIBLIOGRAPHY

1. Weinstein, E., and Drayer, C. Psychodynamic aspects of combat induced anxiety states. (To be published.)

2. Linn, L. Personal communication.

3. Grinker, R., and Spiegel, J. War neurosis in North Africa, p. 243. New York, Josiah Macy, 1943.

THE TREATMENT OF HYSTERICAL DEAFNESS AT HOFF GENERAL HOSPITAL

ANDREW I. ROSENBERGER, Lt. Colonel, M.C., and
JAMES H. MOORE, Captain, Air Corps

Santa Barbara, California

Hysteria plays an important rôle among those who complain of being hard of hearing. Just how much of the soldier's hearing loss can be attributed to actual physical loss, and how much to hysteria or malingering, is difficult to determine.

True hysterical deafness, however, can be determined with reasonable accuracy. The patient is given a careful examination by a qualified otologist. The air and bone conduction, the amount of vestibular response, the speech and the voice changes are all important phases of the diagnosis. The patient is given several audiometric examinations.

Marked variations of the audiometric tests, including fluctuations of hearing perception, are of extreme significance in diagnosing hysterical deafness. The patient is also examined by the psychiatrist to determine whether or not he has hysteria, or one of the other allied neuroses.

We have found the functional hearing loss among certain types of personalities. There is the hysterical soldier with the typical emotional background and symptomatology. There are patients with a traumatic or toxic history in whom the functional hearing loss remains after physical recovery. There is the type in which the hearing has ceased some time in the past because of deep-seated psychological conflicts or the deafness has been precipitated as a result of severe psychic trauma. There is also the so-called egocentric type who hears only what he wishes to hear. We all unconsciously exclude sounds which we do not want to hear. The egocentric type, however, carries this exclusion to an extreme.

The treatment of these patients is conducted by a psychologist under direct supervision of the chief of the psychiatric division of this hospital. In cases where the disability is totally functional, the patient is convinced in three or more interviews that he will be able to hear normally. He is introduced to people that have recovered their hearing through narcosis. He receives their assurance as to the success of the treatment. Group suggestion is used, usually in the form of typical army informal discussion groups, wherein the patient about to be treated and those who have recovered are brought together in a group to talk over their difficulties. The patient is repeatedly reassured by the therapist that his case is typical of those already cured. He is told that he will merely go to sleep and wake up hearing normally. Every effort is made to prove to the patient that he has hearing and that the treatment will enable him to use it. Often the patient, after questioning, will remember instances when he has heard well. He will be shown that his hearing is due to some nervous trouble because it is obvious that he can hear better when he is not emotionally disturbed. Other such devices will be adapted by the therapist to fit the individual cases. When the patient is fully convinced that his hearing is about to be restored, he is ready for narcosis.

In all these cases sodium pentothal is given intravenously. The average case requires administration of the drug for about 25 minutes, preferably in the surgery division where oxygen is available. The patient is placed on the operating table. A Ravox or other hearing aid is placed upon his "bad ear." He is again reassured that upon awakening, his hearing will be restored and that any other conversion symptoms he may have are about to be eliminated. As the injection is made, the patient is instructed to count backward from 100 to 1. His conversation will usually become incoherent before he has counted 50. The pentothal should be administered slowly. The anesthetist should either gauge the speed of the injection so that the patient will receive three-fourths of a gram or less within 30 to 40 minutes, or inject it at such a speed that the patient will be in a so-called babbling

narcotic state for most of the desired time. When, with the use of the hearing aid, the patient will count and stop counting upon request, he is asked the following questions: What is your name? Your age? Your rank? Your serial number? Your home address? Your wife's name? He is assured and reassured that he is now about to recover his hearing. The hearing aid is removed and the external ear is sprayed with ethyl chloride, ether or some other harmless chemical that greatly changes the temperature of the skin. Then the therapist begins to ask questions without the use of the hearing aid. Sometimes a great amount of suggestion and persuasion is needed to secure answers. After each answer, the patient is assured that he hears well because he heard and answered the previous questions. The patient's eyes are closed. The hearing in one ear is blocked out and the therapist continues to ask the questions and backs away slowly to a far corner of the room. He then assures the patient that he hears well, the attendant tells him that the therapist was far away and that his hearing is now perfect. The procedure is then repeated with the good ear. Many times the patient will not hear at all when the hearing aid is removed. Continued rapid suggestion should be given until all effects of pentothal are gone. Many patients do not admit hearing until several hours after treatment.

Usually at the end of 2 hours, the effect of pentothal wears off and the patient is aware that he can hear well. Conversation must be smooth and persistent. Under narcosis the patient forgets in a few minutes a large part of the details of what he has said prior to the treatment. He also forgets that his hearing has returned. He must be informed again and again that he can hear. By this time the emotional blocks that lead to the symptoms of hysteria are being resolved, thus obviating the danger of the symptoms returning or becoming converted into other symptoms. We, however, must continually reassure the patient that he is stronger now and can handle every difficulty, that he can hear normally and that all head sounds will disappear in a day or two. This reassurance must be continued as long as the patient is under the effects of the narcosis.

Forty-five patients were treated by the method outlined.

Reports of Cases

Case I.—This 20-year-old male had an insecure home life and an unstable unhappy youth. In civilian life he had worked as a blaster; occasionally after blasting he would be unable to hear for a few hours. He developed the fear that he would lose his hearing entirely. Upon entering the Army he worked diligently and received the rating of a corporal. He developed however a marked aptitude as a blackmailer. A soldier under his jurisdiction returning late on a pass or caught with a pair of crooked dice was forced to "pay off." He would accompany other soldiers to a red light area and then threaten to tell their wives if he was not paid for his silence. These activities clashed with the dictates of his conscience and he began to show severe anxiety. In basic training he was required to run the infiltration course in which live ammunition and land mines were used. Shortly after running this course, he was shipped overseas. During the sea voyage his hearing began to decline. A few weeks after arriving in Europe, he was returned to America totally deaf and was sent to an army hearing center.

After adequate pre-suggestion, in which he was convinced that his hearing would be restored, he was given sodium pentothal. Shortly after the injection of the drug, the patient started babbling about the dangers of the infiltration course; he recounted his fears and exhibited a great deal of emotion. These statements were mingled with confessions of his blackmailing activities. He would call out to his former victims and in high emotion would argue with them. During this performance he gave no evidence of hearing any sounds. After returning to the ward, he continued talking, repeating over and over again his traumatizing experiences. Finally the therapist, recognizing that the patient was rapidly approaching the point of awakening, grasped his arm and shouted, "Planes! Planes! Hit the dirt!" The patient's eyes opened as he jumped off the bed and dived to the floor in a prone position. After a minute he arose and cried out, "Planes! Planes! I hear them." He rushed to the window and looked out at a squadron of marine torpedo bombers flying overhead. Immediately after that he could hear a few spoken words. With repeated psychotherapy his fears were alleviated and he was convinced that his sins were forgiven. He continued to improve rapidly and by the time that he was out of the narcosis, he had normal hearing and the severe anxiety had subsided. Before the treatment, he had 100% loss of hearing in both ears. He remained under close observation for 3 weeks, at the end of which he was quite well emotionally and his audiometric hearing loss was 19% right and 22% left.

Case II.—This 26-year-old male technical sergeant was a hard working, conscientious farmer. In civilian life he was a valuable member of the community and an active participant in church work. Although worrying about his wife and baby, he resolutely did his duty in combat and as a leader of his men. His platoon followed him with great trust. He looked upon them as his boys and if any

man was killed or maimed, he took the matter to heart and built a strong resentment against the enemy. His religious conscience bothered him a great deal. Over and over again he was tormented with the faces of the enemy that he had killed, or the buddies of his that had been killed through some imagined neglect on his part. His emotional and nervous tension increased; and one day when he was in a foxhole with his buddy an artillery shell crashed down. His buddy was killed and the patient found himself with a complete loss of hearing. He was returned to the states and sent to an army hearing center. Here he showed symptoms of severe combat reaction, headaches, nervousness, tremulousness and anxiety.

He was given 0.625 gram of sodium pentothal intravenously. He was carefully examined prior to the injection and he admitted practically no hearing. Shortly after the injection was begun, he lost consciousness. A few minutes later he awakened and began muttering. He was told that the time had come for his hearing to be cured. Ethyl chloride was sprayed upon his ears. He was given continuous suggestion for 15 minutes and told that his hearing was cured and that from now on he could hear and hear well. He was asked many questions until, from across the room, he was able to hear a low spoken voice. He was returned to the ward and was kept in continual conversation for 2 hours, during which time he told of many things that were bothering him. He was assured and reassured that he was forgiven for all of the wrong that he had done, that the European war was over, that he could hear and that his men were safe now. After the effect of the drug had worn off, the patient not only heard normally, but he expressed great enthusiasm. The tenseness, anxiety and apprehension had entirely disappeared. Before treatment he had shown 52% loss on the right and 82% loss on the left. He remained with us for about 3 weeks after the treatment and on discharge he had no audiometric hearing loss and excellent emotional control.

CASE III.—This patient worked in a quarry before entering the Army. One of his tasks was to swing over great depths with dynamite in his pocket. This created violent fears which he attempted to conceal. When he would return home in the evenings, his parents would quarrel and he would have to intercede. These factors kept him in a continual state of emotional disturbance. One day when dynamite exploded accidentally, the patient was temporarily deafened. Later another such explosion killed a friend of his and his hearing became worse. He grew anxious, apprehensive and fearful. After joining the Army, his hearing continued to grow worse, and because of this difficulty he remained in this country. Upon arrival at the army hearing center, he was trained in lip reading and given an hearing aid. While there was definite evidence of a nerve type of hearing loss (loss of high tones and vestibular vertigo) it was decided to try narcosynthesis. He showed 100% loss of hearing on the right and 90% loss on the left.

Pre-suggestion was not very successful. The patient expressed the opinion that he was "deaf as hell" and nothing could be done about it. Under pentothal he gave no response until a hearing aid was placed upon his ears. He answered questions well with the hearing device. Gradually the power was decreased until he was hearing without the aid of amplification. His ears were sprayed with ethyl chloride and he was told that he was cured. Continued suggestion was used for about 15 minutes. Gradually the hearing aid was withdrawn until finally he could hear well without the aid. The patient was returned to his room and given psychotherapy for another 2 hours. Gradually the effect of the drug wore off and the patient was able to hear with fair acuity. Subsequent tests showed that there was normal hearing in the left and 16% loss of hearing on the right. The intense emotional disturbance had subsided. He was with us for another 2 weeks and at the time of discharge, he continued to show good hearing and excellent insight. This is an example of a functional overlay and a true nerve deafness.

CASE IV.—This 27-year-old soldier, a child of immigrants, was a meek, retiring individual naturally given to fears and introspection. Pressure of poverty, highly emotional parents, a dominating mother and fear of hostile neighborhood ruffians contributed to an unstable and insecure childhood. He suffered from discharging ears from the age of 3 years. Family conditions forced him to leave school when twelve years of age and seek employment. Although work was not always available, he married early and had two children. He shows an intense devotion to his family. Their hardships caused by his unemployment, resulted in increasing anxiety. Thus by maturity he had developed a definite hysterical personality with strong anxiety symptoms. He was drafted, sent overseas and ordered into combat. There immediately appeared a violent conflict. On the one side was his unstable anxious personality, weakened by fears for his family and fears arising from a feeling of physical inferiority. On the other side was a terrific animosity for the Germans because of their treatment of the Poles, including some of his own relatives, and the usual animosity of soldiers who see their buddies killed. In this case an exploding shell furnished a suitable precipitating factor, and immediately after, the patient developed hysterical deafness and a severe combat reaction. He was returned to a hearing center and after a routine examination, he was given sick leave. Upon returning home to his wife and babies he regressed to childhood levels of emotional control. He was too frightened to return and overstayed his leave. He cowered about the house until arrested by the authorities and returned to the hearing center. Our examination revealed that he was in no condition to stand trial. Therefore he was given psychotherapy for one week and then sodium pentothal narcosynthesis. Then under narcosis it was revealed that he had killed several of the enemy. While this allowed a partial solution of the conflict, it created in him a great sense of guilt, which was relieved by recreating and re-evaluating his battle experience. Following

reaction from the narcosis, he showed normal hearing and a marked improvement in the combat reaction symptoms. Psychotherapy was continued and he received vocational counseling. He adjusted so well that he was able to withstand further extraneous difficulties. His hearing loss at the time of admission to the hospital was 54% on the right and 20% on the left. At the time of discharge, four weeks after the narcosynthesis, the audiometric hearing loss was 15% right and 0% left.

CASE V.—This 40-year-old soldier was born in the middle west and reared in a strict, religious family. He was given a high school education and one year of college. He then started to earn his livelihood as a writer. The patient was quite intellectual and had a strong social conscience. In his early years he had a strict moral code, which he gradually relaxed as he became more successful and associated with more worldly individuals. He lived with one girl out of wedlock for several years.

He was quite successful in his profession and at the time of his induction into the Army had an excellent income. However, the stress and strain of remaining on top had a telling effect. He became very tense, tremulous and high strung. He served in a non-combat organization for almost 3 years. He reacted very poorly to his environment, became more restless and finally there were the symptoms of deafness. When he was referred for treatment he had 35% loss of hearing on the right and 54% loss on the left. He was very tense and apprehensive. For several days he received psychotherapy. There was much pre-suggestion and explanation. His fears concerning the state of the world, the political situation, the morals of the people and dangers to the freedom of the press were alleviated. He was convinced that his hearing would be restored. Under sodium pentothal he revealed great antipathy to what he termed the inefficiency of organized society. He was under a great deal of tension when he discussed living with the woman out of wedlock. This apparently conflicted with his early sense of moral right. Upon recovering from the narcosis, he had normal hearing and made a fair adjustment of his emotional difficulties. He remained with us for several weeks and on discharge there was no regression of the emotional picture. The audiometric hearing loss was 20% right and 10% left.

SUMMARY

This is a preliminary report of our clinical experiences and treatment of 45 patients afflicted with hysterical deafness.

These patients were given sodium pentothal narcosynthesis. Of this group 16 had been overseas in combat; 14 had been overseas, but not in combat; 15 had no overseas duty. Twenty-two gave a history of deafness prior to induction and one admitted hearing loss for 32 years prior to induction.

In the true hysterical patient the results were spectacular. When there was an element of conscious simulation, an improvement in the hearing loss was observed but normal audiometric readings could not be obtained.

Intensive therapeutic efforts were continued for several days after narcosynthesis, followed by daily consultations with the neuropsychiatrist over a period of 2 to 4 weeks. The condition of these patients having remained stationary, with no evidence of regression during this period of observation, separation from the service was carried out.

The period during which these cases have been observed is insufficient to warrant undue optimism. Failures are anticipated but it is believed that this preliminary study warrants further investigation.

"FURLOUGH" PSYCHOSIS [1]

GEORGE F. SUTHERLAND, MAJOR, M.C., A.U.S., AND MILFORD E. BARNES, CAPTAIN, M.C., A.U.S.

Furloughs and leaves are regarded as restorative periods of rest and recreation. That they may be as emotionally trying as hard campaigns is likely to escape attention. In the soldier one is accustomed to associate emotional up-sets with vicissitudes of military life(1, 2). In the reactions which we are about to describe, on the contrary, it is the sudden release from military authority which precipitates the psychosis. By "furlough" psychosis we refer to an episode of the acute schizophrenic type(3) attendant upon the sudden emotional readjustments which a furlough or leave entails.

In the course of the past year a significant proportion of the patients admitted as casuals from furlough to the neuropsychiatric section of a large military hospital have fallen into this category. In the typical case the patient has returned from overseas on leave or furlough and for the first few days seemed well and happy. Soon, however, his relatives and friends began to notice that his personality and behavior were undergoing an alarming change. They remarked that whereas at first he seemed his usual self, he later became irritable, tense and behaved strangely. He appeared bewildered, indecisive and seclusive. He ate little, slept poorly and frequently wandered about the house during the night. In spite of their reluctance to terminate his visit at home prematurely, some incident occurred which led the family to fear for the patient's safety and prevailed upon him to report for medical advice.

On admission to the hospital the patient was confused and occasionally disturbed. Mood was apprehensive with some depression. Affect was inappropriate. Attention and concentration were maintained with difficulty. Speech was rambling, irrelevant and frequently incoherent. Delusional trends and ideas of reference were prominent. Hallucinations were present in some cases. Orientation was sometimes accurate. Memory, recent and sometimes remote, was defective. Suicidal trends were frequently present. Intellectual assets were impaired. Insight was lacking and judgment correspondingly affected.

When first seen at the hospital the patient's condition was occasionally mistaken for alcoholism. The patient often seemed eager to excuse his behavior on this ground, insisting that he had been drinking excessively. The relatives were usually quite as emphatic in denying this statement. The subsequent course of the illness showed that alcohol played only an incidental rôle.

During the early part of his hospitalization the patient became progressively worse; the delusional trends became more pronounced, speech approached a state of near mutism, stereotypy was marked and refusal of food was common. The most outstanding symptom was a severe degree of confusion with blocking of thought processes. After approximately two months hospitalization, slow but gradual improvement ensued. The usual forms of therapy proved singularly ineffective in shortening the illness. However, shock therapy was not tried. Confusion was the most lingering of the symptoms. In no case was it possible to return the patient to duty.

Twelve cases came under our observation, of which 4 typical case histories are cited.

CASE I.—First Lieutenant, Army Air Force, 28 years of age. History reveals that the patient was a quiet, well liked person with feelings of inferiority. He was constantly exhorted by his dominating mother to enter the ministry. He enlisted in the Army in 1938 in order to avoid criticism because of his lack of enthusiasm for this vocation. He married in 1940 after being commissioned. This patient served 27 months overseas without apparent incident and was returned to the United States on rotation. While overseas he began to worry about his wife's pregnancy and her ability to care for the child after it was born. While home on leave he became "nervous," expressed fear that his young daughter was not normal, and was indecisive in his actions. He then began to drink excessively and to

[1] From the Neuropsychiatric Section, Crile General Hospital, Cleveland, Ohio.

wander about at all hours of the night. His behavior became so unpredictable that his wife feared that he would be unable to proceed to his next station unaccompanied. He was, therefore, induced to report to the hospital for advice. He came asking if he were fit to drive his car. His rambling irrelevant conversation and his obvious confusion led to immediate hospitalization. He was first admitted to an open ward but his increasing confusion necessitated his being transferred to a closed one. Mental examination revealed retardation and depression with inappropriate affect. Attention and concentration were greatly impaired. Orientation was accurate but his memory for recent events was poor. Vague delusional trends of self-accusatory character were present but no hallucinations were elicited. Insight and judgment were greatly impaired. At first his appetite was fair but later he became suspicious and declined to eat without urging for a short period. Insulin sub-shock treatment was tried without benefit. After 2 months hospitalization spontaneous improvement ensued. At the height of his illness an interview conducted under amytal revealed marked guilt feelings with sexual preoccupation. A formal diagnosis of schizophrenia, type unqualified, was made and he was retired from the Army. At the time of his discharge from the military hospital he had improved but was still confused, incoherent and apathetic.

CASE II.—Private, Infantry, 20 years of age, an only son. His father was dead. The patient was sensitive and shy, well liked by men but had few social contacts with the opposite sex. Patient was overseas for 7 months and returned to the United States in June 1944. Shortly after his arrival home on furlough he became excited when another soldier ridiculed him at a dance and was advised by civilian police to go home. Upon his arrival home his mother became alarmed at his threatening attitude and called the police department. During the excitement he left the house and was apprehended while creating a disturbance in the public square. He was admitted forthwith to a military hospital. On admission he was disturbed and aggressive. He was hallucinated and delusional, declared female witches and movie stars told him to have a good time; he controlled the moon and the stars and said that all larvae must be destroyed. For a period of 3 weeks little change in his condition was observed but subsequently gradual improvement ensued. At the end of 2½ months he was transferred to a Veteran's hospital with a diagnosis of dementia præcox, catatonic type. At that time his sensorium was clear but his behavior unpredictable and his mood one of apathy.

CASE III.—First Lieutenant, Army Air Force, 25 years of age. In civilian life was well liked and a jovial sort. He worked for his brother as a shoe clerk and had never been away from home for any length of time. Two months before going overseas he married a girl he had known only one week. After serving 19 months overseas he was returned on rotation. During the time he was away his father died and his brother was killed in another theater of operations. While overseas he complained of headache and was hospitalized for a short period and then returned to duty. He began to worry about home after he recceived a letter stating his wife was "running around" with other men. Soon after his arrival home friction developed not only between himself and his wife but also with his own family and his in-laws. He felt that others were making fun of him presumably because he had returned from overseas while the war was still in progress. He became increasingly seclusive, irritable, ate very little, suffered from nightmares and complained that the house was too noisy. His relatives persuaded him to report to the hospital because of his unusual behavior and because of the tension he was creating in the household. He entered the hospital complaining that he was making his mother nervous. On admission he was depressed to the point of apathy. He showed little interest in his surroundings; he was correctly oriented; he answered all questions with "I don't know"; and he would supply no information spontaneously. He was confused in his thinking, unable to recall significant dates and his thought processes showed marked retardation. No delusions or hallucinations were elicited. Insight was completely lacking. During the early part of his stay at the hospital his condition became progressively worse. He was extremely seclusive, inactive and spent most of the day lying in bed staring into space. For a time he was almost mute. He complained that others were talking about him and making fun of him. For this reason he refused to go to the mess hall. After 2 months of hospitalization, slow but gradual improvement took place. A diagnosis of severe reactive depression was made. He was retired from active service. At the time of his discharge he was still apathetic and bewildered.

CASE IV.—Private, Chemical Warfare Service, 26 years of age. History reveals a very strong mother attachment. He showed little interest in the opposite sex. Patient remained at home until induction into the Army and was employed in a steel mill as a common laborer. He had few social outlets and spent most of his time with his family. After serving overseas for 18 months, he was returned to the United States on rotation. While at home on furlough, the family noticed that he was moody, lachrymose, irritable, self-critical and at times confused. His sleep became disturbed and for the 3 days prior to his hospitalization he slept very little. Finally when he announced his intention of committing suicide by jumping off a bridge, he was brought to the hospital by his relatives. On admission he was violently disturbed, confused and incoherent in his speech. Mood was depressed and affect inappropriate. Attention and concentration were poor. Memory showed relatively no impairment. He expressed guilt feelings over having been returned from overseas. He stated that he had seen the devil who told him to commit suicide. He had no insight into his condition. After 4 weeks hospitalization he began to improve spontaneously,

but he remained depressed, affectively flat, and vague in speech. A diagnosis of psychosis, undiagnosed, was made and he was discharged from the Army as being unfit for further military service.

The symptom complex seen in these patients was not sufficiently clear cut to include them in a single diagnostic category. The psycho-dynamic mechanisms, however, show a constant basic pattern. These individuals were reared in a home atmosphere where maternalistic dependency was fostered (2, 4). None of them had succeeded in establishing himself vocationally or otherwise as an independent individual. None of them objected to entering the military service; in fact it provided a happy solution for the immediate future. Each got along well in the Army, their military records showing they made good soldiers both in this country and overseas. All showed the mood-swings to which the average soldier is subject under stress but did not show any undue emotional instability. Each felt that he had earned his furlough or leave and eagerly looked forward to returning home. It was only after they returned home that they began to develop clinical symptoms. At first these were vague feelings that home was not as it should be, and that they were not enjoying their homecoming as they had anticipated. They were conscious of a lack of rapport with their environment. This rapidly increased to a point of active criticism and open antagonism toward the home, relatives and friends. Home seemed too small, too noisy or too quiet, and too confused. They complained that they did not experience the degree of freedom they had expected because of the social demands made on them by friends and relatives. Many resorted to alcohol as the solution to their difficulties. The minor decisions which they were called upon to make became bewildering and irritating. They resented the attitude of civilians, who they felt were betraying the soldier overseas, and began misinterpreting casual conversation as adverse criticism. Not infrequently the actual spark which set off the emotional explosion was a chance remark which the patient felt implied cowardice on his part. It was at this point that his symptoms became so obvious that hospitalization was necessary.

It is commonplace for soldiers who have been overseas on returning home to experience at first a sense of insecurity, of strangeness, and of being out of place at home(5). They are apt to be intolerant of civilian life. They are surprised to find that parents and children have grown older; their former social world has been disrupted; and in general homecoming is not as they had pictured it. The realization that they will be unable to accomplish all that they had hoped to do in the limited time allotted them often leads to a panicky feeling and a sense of frustration. Unlike the average soldier, our patients were unable to cope with the situation and actual panic did supervene. We feel the explanation for this behavior lies in the unusual dependency of our patients on military authority and their inability to adjust to its sudden withdrawal(6).

It has already been pointed out that these individuals prior to induction into the military service, had not achieved the financial, vocational or emotional independence characteristic of maturity. For these individuals entry into the Army obviated the necessity of a personal struggle for independence. The Army provided them with a ready made sense of security, importance and emotional maturity reflected from the military might of which they had become a part. They had more social freedom and they were relieved of the immediate necessity of planning for the future. The transition from civilian to military life was accomplished with relative ease for psychologically they merely exchanged the maternalistic domination in the home for the paternalistic protection of the Army. For them the latter was more advantageous because its impersonal quality allowed them more apparent personal importance. The complete severance of the home ties occasioned by foreign service led them to depend more and more on the Army for security and direction. So long as this relationship was maintained they were able to function without emotional conflict.

The return home effected a temporary abrogation of this relationship for which they were ill prepared in view of the readjustments they were called upon to make. In the first place, they were obliged to re-orient

themselves to the home which had undergone a number of changes in their absence. Their families had learned to function without them and their presence was no longer an integral part of the family milieu. The process of re-establishing themselves in the family entailed the necessity of making decisions for which they were obliged to assume full responsibility. In the second place they were called upon to assume this responsibility without support of the military authority on which they had come to rely for approval and guidance. Thus homecoming presented a double threat. Furlough or leave presented these soldiers with a situation in which they were suddenly deprived of military authority, apparently rejected by their families and consequently thrown upon their own slender resources.

The sudden withdrawal of military support was undoubtedly the incident which precipitated the emotional disturbance. Had the change been more gradual, one may conjecture that its effect would have been less cataclysmic. Thus far there has been little opportunity for observing the dangerous effects of the sudden withdrawal of military guidance on dependent individuals since few soldiers have been returned from overseas other than through medical channels. With the cessation of hostilities in Europe and the consequent return of large numbers of soldiers, these cases should be encountered more frequently.

SUMMARY

Twelve cases were observed showing an acute schizophrenic reaction, seemingly precipitated by the sudden emotional readjustments necessitated by leave or furlough.

The onset of the symptoms occurred abruptly a few days after these apparently well adjusted individuals had returned home. The clinical symptoms, however, were not sufficiently clear-cut to include them in a single diagnostic category.

The 4 typical case histories cited indicate that the episode was provoked by the sudden release from military authority upon which the individual had become emotionally dependent.

REFERENCES

1. Smith, E. R. Neurosis resulting from combat. Am. J. Psychiat., **100**: 94-97, July 1943.

2. Duval, A. M., and Hoffman, J. L. Dementia præcox in military life as compared with dementia præcox in civil life. War Med., **1**:854-862, Nov. 1941.

3. Porter, W. C. The functions of a neuropsychiatrist in an army hospital. Psychiatry, **5**: 321-329, 1942.

4. Steinberg, D. L., and Wittman, M. P. Etiological factors in the adjustment of men in the armed forces. War Med., **4**: 129-139, Aug. 1943.

5. Meakins, J. D. The returning serviceman and his problems. Can. Med. Assn. J., **51**: 195-202, Sept. 1944.

6. Kemble, Robert P. Some uses of military authority as psychotherapy. Am. J. Ortho-Psychiat., **12**: 462-465, 1942.

PERSONALITY STUDIES OF MARIHUANA ADDICTS

SOL CHAREN, B. A., M. A., AND LUIS PERELMAN, B. H., B. M., LIC. M., M. D.

Fort McClellan, Ala.

Studies of addiction to marihuana seem, in the main, to have ignored the personality pattern of the user; emphasis has been largely on medical, pharmacological and sociological aspects. The personality studies which have been made are either anecdotal or of subjective experiences. The literature of marihuana addiction contains little of the type of research that has been done, for example, on the alcoholic personality.

We have had the opportunity to make intensive case studies during the past seven months of 60 marihuana addicts hospitalized in the neuropsychiatric service, Regional Hospital, Fort McClellan, Alabama. Detailed life histories were obtained which brought out environmental backgrounds, family histories, behavior patterns, drives, attitudes and interests. Through the helpful cooperation of Major Lawrence Radice, M.C., psychiatrist in charge of the consultation service of the Infantry Replacement Training Center at Fort McClellan, additional data were obtained which made possible statistical validation of the personality studies. The study of Marcovitz and Myers, "The Marihuana Addict in the Army," which was published while our study was in progress, was also a great help.[1] Their conclusions as to the socio-economic factors, personality picture and the difficulties of the addict in the military situation were very positively supported by our findings. Their study and ours show a definite motivation towards use of marihuana clearly revealed as part of the personality pattern of the user.

TYPE OF SUBJECT STUDIED

Marcovitz and Myers studied 34 Negro and one white addict who had difficulties which brought them to the attention of military or medical authority. At Fort McClellan, with a ratio of seven white infantry training regiments to one Negro infantry regiment, the addicts referred to Major Radice or the neuropsychiatric service numbered 55 Negroes and only 5 white soldiers.

The preponderance of Negroes is due, we believe, to the peculiar need marihuana serves for them. The Negro psychopath or neurotic faces not only inner anxiety resulting from childhood family relationships, but also suffers from a feeling of resentment towards the submission which is required by the white stereotypes of Negro behavior. Marihuana, insofar as it removes both anxiety and submission and therefore permits a feeling of adequacy, enables the Negro addict to feel a sense of mastery denied him by his color. The white psychopath or neurotic not faced with a dual problem of personality and environmental frustration finds alcohol or other forms of satisfaction more acceptable.

REASONS FOR ADMISSION

Of the 60 addicts studied, only 9 were referred for psychiatric study because of non-psychopathic behavior. Twenty were awaiting court martial for such offenses as insubordination, frequent AWOLs, causing trouble; 5 were referred as part of IRTC policy of study of AWOLs; 16 were referred by company commanders who found them behavior problems or poor soldiers but had not preferred any charges; and 10 had been referred primarily as drug addicts. A total of 85% can be classified as being undesirable army material because of attitudes and behavior, and the remaining 15% as potentially unfit because of neurosis or poor morale. Sullenness, resentment of authority, lack of motivation to army service were typical of nearly all. The common story of these men was that the Army failed to understand them, and there was a childish, sullen resentment to regulations and discipline.

AGE AND ARMY SERVICE

The age of the addicts was usually in the early twenties. This, of course, was because

[1] Marcovitz, E., and Myers, H. J. The marihuana addict in the Army. War Med., **6**: p. 389, Dec. 1944.

they are infantry soldiers, since this branch of the service consists largely of young men.

The average length of service was almost 6 months, but 21 or 35% had less than 4 months of service when referred to the psychiatrist. Lest it be thought that these men had received 6 months training, we should explain that in many instances AWOL or need for medical treatment prevented training. In terms of proper army attitude, behavior, and actual time spent in training we found only 2 had acceptable records. Based on Marcovitz' and Myer's study, as well as our own, we can safely hypothecate that the Negro marihuana addict makes a very poor soldier.

Family Background

position in the family

One of the startling similarities revealed was the position of these addicts in their family group. Twenty-one or 35% were the only child in the family. This was because nearly all came from broken homes. Only 9 or 15% came from what is considered desirable home environment. The other 85% had the roots of their personality in bad or broken childhood home situations.[2] Further analysis of their position in the family showed 28% either the oldest or youngest in families consisting of more than two children. Most common factor to all these addicts was that of a broken home, 63% having lost one or both parents. In terms of position in the family the only child or the youngest or oldest in the large family stood out. Of the 38 cases of broken homes, 12 were due to death of a parent, 16 to desertion of a father, 2 to divorce, and 8 to separation of parents.

[2] Marcovitz and Myers found similar results. They list the following factors:

Known Family Background in 20 Cases

Background *	No. cases
Early death of parent	11
Separation or divorce	7
Neurotic parent	7
Delinquent parent or sibling	4
Step parent	2
Insanity	2

* In several cases 2 or more of the factors were combined.

Economic Background

From an economic standpoint 16 individuals came from homes where there were above average living standards with some luxuries, and 34 were from marginal levels of frequent or infrequent poverty. No conclusions could be made for 10 of the addicts. Economic backgrounds were sharply divided into these two categories.

Parents

Personality of the parents as remembered by the patients showed definite similarities. Sixty-eight percent of the men furnished a picture of a father with very undesirable traits; they were described as drunkards, heavily promiscuous and very definitely undesirable by the addict's own standards. However, 60% of the mothers were reported as being very strict with definite ideals of morality and behavior, and as making stern efforts to inculcate high moral standards, sometimes using physical punishment when these standards were not met. Another 35% describe their mothers as being of good moral character, attempting to train sons properly, but not resorting to physical punishment or threats. It can be safely assumed that nearly all of those who had known the influence of a mother had childhood training which should have made them good citizens. Most of the men spoke with respect of their mothers, showed no signs of bitterness or resentment. Those with living mothers stated they still obeyed them, feared their disapproval, and definitely tried to conceal psychopathic behavior from them.

The conclusion may be drawn that these addicts had a father either lacking or of such poor character that he was not a desirable pattern for them to follow; and that parental strife, resulting from the opposing characteristics of father and mother, laid the foundation for inner conflict in their sons.

Early Childhood

Emotional instability in childhood was found to be common among all. Fifty-one admitted nightmares which, in many instances, persisted into adult life. Nail-biting, enuresis, sleepwalking and sleeptalking were also typically present. Bedwetting to late

adolescence was common. Attacks of dizziness and fainting spells were admitted by a large percentage. We were able to obtain details of common nightmares from 8 of the men and strong indication of super-ego punishment and latent homosexuality were quite evident.

Mental defectives are in general rejected by the Army, so none of the men could be considered as subnormal. In terms of the Negro population in this country these men were within the range of normal intelligence. Army tests showed this to be true although records of school showed only 11 had better than junior high school education, and 25 had less than grade school education. The point is that none of these marihuana addicts can be considered as borderline in intelligence, or even as dull. They were equipped to adjust mentally to their environment although they failed to take advantage of opportunities for an education.

School Behavior

Forty-six men admitted delinquent behavior during their school years. In general they were candidates for reform school; habitual truancy, arguing or fighting with teachers, gambling, sexual activity, associating with undesirable companions, petty thievery, lack of interest in school were common. A number were forced to leave school or to transfer before the legal age. In general they left school very gladly when of age.

The period shortly after pubescence was when these patients showed their first symptoms of psychopathy and resentment to authority. Despite maternal influence they soon associated with other students of undesirable character. Many contracted the marihuana habit from school companions, and sex activity was begun in early adolescence.

Work

Fifty-one admitted a poor work history. There were frequent changes of jobs, drifting from city to city, arguments with employers. The men commonly worked as laborers on jobs which permitted little personal expression. Those who had not yet contracted the marihuana habit soon did from fellow employees. They chose to associate with coworkers of the same nature as themselves, or quickly found associates outside of work who were fellow psychopaths.

Both Marcovitz and Myers,[3] and the Mayor's Committee on Marihuana,[4] found that marihuana addicts had poor work records, with unemployment or part-time work common, and little desire for work.

The men in our study readily admitted mild use of marihuana during working hours or coming to work already drugged. By means of the drug they were able to endure the monotony of their tasks. Off work hours were spent sleeping, smoking marihuana and associating with other addicts in search of pleasure.

Criminal Activity

Only 10 in our study had never run afoul of the law. The others were arrested for crimes ranging from murder to drunkenness. No attempt was made to classify the arrests by type of crime; but drunkenness, disorderly conduct, fighting and petty thievery were most common. Few could be called professional criminals; they were nuisances from the police viewpoint.

The contention that marihuana causes crime has been made.[5] In refutation the Mayor's Committee on Marihuana claims that although the marihuana smoker is guilty of petty crimes, the criminal career existed prior to the time the individual smoked his first cigarette. They quote Bromberg as follows:

> As measured by (court records in New York County) . . . it can be said that drugs generally do not initiate criminal careers. The expectancy of major crimes following the use of cannabis in New York County is small . . .[6]

The history of the 60 addicts studied in this article shows an established pattern of delinquent psychopathic behavior from the standpoint of family anxiety patterns, school behavior and work history. Infractions of the law are to be expected, regardless of the use of marihuana. The underlying personal-

[3] Ibid., p. 385.

[4] New York (City). Mayor's committee on marihuana. The marihuana problem in the city of New York. Lancaster, J. Cattell Press, 1944, p. 12.

[5] Walton, R. P. Marihuana: America's new drug problem. Philadelphia, Lippincott, 1938, p. 31.

[6] Mayor's Committee, op. cit., pp 14-17.

ity is primarily the determining factor in criminal behavior.

We can summarize by stating that these men had traits of character which lead to conflict with the law. Basically the urge for criminal activity must be present. Use of marihuana lessens or eliminates anxieties which interfere with the urge for lawlessness.

Sexuality

A popular concept is that marihuana smoking causes definite desire for sexual excesses. Analysis of the sexual behavior of the subjects of this study was very interesting. Only 8 subjects had what could be called a normal heterosexual pattern (not necessarily a moral one) in that sex activity was not the predominant drive in life. Seventeen or 30% admitted excessive sex activity but on a heterosexual level while an additional 30% admitted sex gratification with both men and women. Ten or 18% were definitely homosexual, nearly all playing the passive rôle. Surprisingly, 3 addicts admitted sex satisfaction only by masturbation while 1 claimed to be impotent.

Whether through psychic or genital irritation, marihuana was associated as a factor in sex drives by our subjects. Many of those with heterosexual desires claimed a lack of interest in women unless under the influence of the drug. Further questioning revealed that it was not necessarily a lack of libido which caused such restraint, but rather a lack of confidence in ability to seduce the opposite sex acting as a factor to inhibit sexual desires. Marihuana gives increased confidence, making women powerless to resist their blandishments and masculine charms; they also had more confidence in their sexual strength when "high."

For most of the 60, sexual satisfaction without any desire for emotional ties was characteristic. Emotionally, their sex life can be said to have existed on a masturbatory level, as far as love for the opposite sex was concerned. Many of our subjects from large cities admitted weekly participation at gatherings or "tea parties" where marihuana was smoked. As part of the entertainment "circuses," presentations of perverted sexual practices, were staged. Their statements were in direct contradiction to the situations found by the Mayor's Committee on Marihuana: investigators claimed marihuana parties were in no way used as preludes to sex immoralities but existed primarily for the sole enjoyment of the drug.[7] According to our subjects "everything went at a tea party." There was no sense of shame among the participants and guests, but an eager desire to regress to a childish level of sensuality, to defy and flout accepted standards of morality. We were told of the eating of feces, of the swallowing of leukorrheal discharges, of other activities in which individuals vied with each other to see who could commit the most disgusting acts. All sorts of perversions, both homosexual and heterosexual, were staged. "Nothing seems wrong any more," one of the patients commented. "You see lots of queer things going on that you never dreamed existed." Marcovitz and Myers in "The Marihuana Addict in the Army" give an excellent description of such parties, to which many homosexual and other perverts are attracted. Use of the drug forms a common bond, and all present lose their sense of inhibition.

Marihuana smokers as a rule prefer the society of their own kind. Non-addicts are called "squares" and are not accepted or wanted in the group. In talking with homosexuals who were not addicts we found they rarely associate on close terms with addicts. Homosexuals who were addicts had two circles of friends, one of homosexuals like themselves, and the other of addicts. Marihuana addicts consider themselves on a different level of society with certain common interests, among them the enjoyment of marihuana. They prefer the society of "freaks" [8] or "tea hounds" to so-called "squares." There was a recognition of being social outcasts and of living in a world of different standards.

Many of these men frankly admitted that only when under the influence of marihuana were they able to enjoy homosexual and perverted behavior. The sense of shame and disgust disappears under marihuana to be replaced by the over-powering desire for

[7] Mayor's Committee, *Ibid*, pp. 13-14.

[8] According to one man, "Something wrong with everyone of us and we put on a wonderful show just like at a circus."

sexual gratification at the level of infantile behavior.

Recognition of Addicts

These addicts readily admitted ability to recognize other addicts, either by their eyes or by the use of slang. They were vague about the eye-signs, although a narrowing and glittering of the pupils was mentioned by several. "The police get mad when they see us wearing dark glasses. They know we are not wearing them to keep the sun out of our eyes."

Use of slang was a definite means of recognition among strangers. Walton furnishes a few terms,[9] and the conversation of the addicts interviewed by Marcovitz and Myers is very striking. The casual use of the word "solid" with the reply "solid" is often the opening for further exploratory remarks. There is a ritual handshake, a brushing of palm against palm.

"Are you sticking, Jack?" (Do you have or use marihuana) one asks.

"How long since you been up there?" (How long since you have had any marihuana) is the reply.

Other examples of slang:

"How about straightening a guy out?" (Furnish me with a supply of marihuana), which can also be said: "Where can a guy get straight?" or "Can you do me any good, daddy?"

Additional slang is listed with which illustrates the flippant attitude of the addict.

Gage, jive, weed, tea, reefer, shit	Marihuana.
Black gold	An expensive hemp of great strength believed to be imported from Mexico or India.
Dry	Weak, not full strength, in reference to marihuana.
Blow, blowing, or blowing gage	Smoking marihuana.
Solid	We understand each other.
Look here daddy, where can I pick up	Where can I get marihuana.
Are you hep	Do you use marihuana?
Does he get straight	Does he use marihuana?
I want to pickle some of that righteous junk, or, let's get on with them, or, let's knock ourselves crazy.	I want to try marihuana.
Hop party, gage party, grass party	Marihuana party.
Viper	Smoker or addict.
Hop head	Confirmed addict.
Fay hound	Homosexual addict.
Hip patty	White addict.
Fly	Woman addict.
Square, jasper	Non-addict.
Cat	One of the group, one in the know.
Green	New smoker.
Feel like the world's against me	I'm suffering from lack of marihuana.
I'm high and feeling good	Opposite of above.
He was high, or, he was out of this world, or, he was blind.	All refer to the intoxicating effects of the drug.
Bottle of coke	Cocaine.
Mary's house	Morphine.
Spirits	Whiskey.
That's a good deal	Yes.
Gold, lettuce, ace, mickie	Money.
Kneebender	Homosexual practicing passive fellatio.
Mad or frantic	Wonderful! or that's great!
I am very salty	I am angry.
The cat was mad; he was shot and beat for sleep.	That man was angry, disgusted and tired.
Let's knock Harper dead in the head and beat him for his skypiece and drain him and throw his dirty body away.	Let's open a bottle of whiskey, drink it and throw the bottle away.
Beat me pop with the righteous mop, Bam	Let's shake hands.
I am going to a jump. The boys will be there mad. Do you cop, pop?	I am going to a dance. My friends will be there. Do you understand?

[9] Walton, *Op. cit.*, p. 195.

So you are a hip kitty. Have you got your boots latched and your mop ready?	Sarcastic comment about one who is boasting. Literally means, "So you are a wise guy. Are your shoes shined and your fingernails clean?"
Mad pad	Home.
Let's fall down to the stem	Let's go down to the main street.
I'm going to knock myself a righteous juice	I'm going to pour myself a glass of whiskey.
I am going home and cop myself a nod in the lily white and wake up feeling gay and bright.	I'm going home and get some sleep.
I'm going to pick up a fly chick and dig a flicker	I'm going to get a girl and see a movie.

Note that the general tone is very flippant and that there is a rhythm to the phrases. The slang terms are so striking that an addict will quickly become suspicious of a "square" if the other fails to use these terms properly or at all. As can be seen there is a vocabulary built around the use of marihuana sufficient for lengthy conversations which the "square" will find very mystifying. With this distinctive language, the sharing of mutual experiences and background, as well as the interest in marihuana, the addict definitely feels that he lives in a world of his own, separate and outside of the world of non-addicts.

Subjective Reactions

A slang term furnished us with provocative information on the individual effects of marihuana smoking. This was the term, "virgin kick," *i.e.*, the reaction of the initiate to smoking. "What kind of kick are you getting?" the chronic addict will ask the new user, referring to the strange and frightening sensations and feelings of depression. The new user will be told these are typical reactions and to continue experimenting until he learns the proper dosage to take. The initiate experiences anxiety and fear over the control the drug assumes over the intellect and is panicky about becoming its slave. The chronic addict can reassure him; when told of particular moods will nod wisely and state that such a sensation is to be expected, that it will disappear later on or can be ignored. Surprisingly, addicts claim that these initial symptoms are common to all users, rather than a matter of individual experience. The initiate is warned about over-use of the drug, but encouraged to experiment until he learns exactly how many cigarettes are needed to achieve a satisfactory state of well being.

We believe, therefore, that experimenters wishing to study subjective reactions should not stop at one or two cigarettes but use them over a period of time. Thus they may study both initial reactions and the state finally achieved by the confirmed addict. The addict is not interested in the primary sensations, in fact he tries to avoid them, being interested only in the ultimate stage of well being and confidence.

Because the first few attempts to learn the habit are somewhat disturbing, some individuals may not become addicts. Marihuana is definitely a group activity in that the new user needs the presence of addicts to encourage him in further attempts.

The addict firmly believes that he has control of the drug and can cease addiction at any time, and that marihuana is not habit forming. He can see no reason for living with anxiety tensions when smoking releases them; thus he seldom makes any effort to quit. In this respect he is much like the tobacco addict.

Some Facts About Addiction

Walton [10] states that use of the drug is widespread among school children in New Orleans. On the contrary, the Mayor's Committee on Marihuana found no evidence that it was a problem among school children in New York City. They interviewed principals and watched dives near schools, but found no evidence of its use.[11] However in our subjects 6 or 13% began use of marihuana prior to adolescence. The largest group, 29 or 64%, were initiated in the period of adolescence, from 12 to 17 years. Another 13% began in their early twenties, and 4 in in middle or late twenties. The average median age of original addiction was 15.3 years. It is realized that this might not be a true picture as our group was weighted with young infantry soldiers. Study of a

[10] *Ibid.* pp 29-32.

[11] Mayor's Committee, *op. cit.*, pp 17-24.

true cross section might reveal a higher age when the habit was begun.

The average median length of time these men had been smoking was approximately 6 years. Five or 11% had been addicted more than 10 years. None claimed to be beginners. Nine or 20% had smoked at least a year, and another 20% from 3 to 4 years. Twenty-seven or 60% claimed to be addicted for more than 5 years. A large percentage of these 27 contracted the habit during the formative years of adolescence.

Despite long addiction these men presumably were in good enough physical condition to meet army standards for induction, and were deemed fit for the toughest branch of the service, the infantry. Inability to adjust to the army situation was in terms of morale and character, not stamina.

Use of Other Stimulants

All of our addicts used other stimulants but insisted that marihuana was the main source of pleasure, the others being substitutes or aids to increase the pleasures of marihuana. We found few among them who were addicted to use of cocaine, morphine or heroin, although a number had tried them briefly. Many used what they called "geronimos," small pills which, according to the patients, contained morphine in a mild dosage. Again, these were used only when marihuana was not available. We are, therefore, inclined to agree with the Mayor's Committee on Marihuana that marihuana smoking in itself does not cause addiction to such narcotics as cocaine, morphine or heroin.[12]

Whiskey was commonly used in conjunction with marihuana, but rarely to excess. Sodium amytal, called "pink ladies," seconal, barbital, benzedrine, nembutal were used daily along with marihuana. Nutmeg smoked in powder form mixed with tobacco was tried as a change. In connection with these drugs the following slang is given:

> One addict will ask, "Have you seen Bennie lately?" (Have you used benzedrine recently.) The other may reply, "No I've been with Meg all night" (used nutmeg). Nutmeg is also referred to as "the lady."

[12] *Ibid.*, p 13.

In the hospital, where the drugs could not be obtained, a common practice was that of smoking aspirins crushed and mixed with tobacco. The opinion was unanimous that it was of no help.

The number of marihuana cigarettes smoked daily varied according to the individual. Some smoked from 1 to 2 daily and others as many as 10. The majority used from 4 to 6 daily. The marihuana was not diluted in any way or mixed with other substances. The dried leaf or top of the plant is rolled in cigarette form and sold commercially.

Attitude about Harmfulness of Marihuana

Not one of our subjects had any desire to stop addiction or be cured. They admitted voluntary cessation at times and therefore claimed the drug was not habit forming. They defended its use on the grounds that it left no physical after-effects. There was a sizeable minority who thought it was harmful but still refused to consider any cure on the grounds that the benefits of marihuana outweighed the harm.

All said their addiction to marihuana was a benefit to the Army as it enabled them to be adequate as soldiers. They therefore argued that the Army should permit them the continued use of the drug. These arguments were highly rationalistic in view of their army record to date. Nevertheless, they stubbornly defended its use with the childish attitude of "I can't be a good soldier unless I smoke marihuana, and I'm such a good one then that I should be permitted to smoke."

Because of these attitudes we cannot agree with Marcovitz and Myers in their contention that long-time institutionalization for treatment of the personality pattern is the answer. The desire to be cured is lacking, the background and personality pattern are too well established for any hope of curative treatment. Institutionalization may be necessary to protect society from these individuals, but not from the standpoint of treatment.

As ward patients in the hospital these men were nothing but nuisances. They had to be kept restricted to the ward to prevent access to marihuana or other drugs. If

allowed freedom on the ward they somehow obtained the drug no matter how closely visitors were watched. They were aggressive and sulky with ward attendants and personnel, and continually complained of various ailments. They were resentful when returned to duty; in one instance military police had to be called. When attempts were made to sedate them with seconal they bothered the nurses and ward attendants constantly for hours before the time to receive the drug. Only during interviews when the men were talked to in a kindly, sympathetic manner was there any change in attitude. During the interview periods they complained at first of myriad aches and ailments, but soon spoke freely, in fact loquaciously. They bragged about their behavior, anti-social and sexually perverted as it was. Feelings of anxiety which they attributed to the drug deprivation disappeared in the course of the interview because they were able to represent themselves as adequate individuals in terms of their own standards.

Discussion

It can be seen that these men possess traits of character and behavior which readily brand them as psychopaths. The basic cause of their psychopathic personality was the broken home, marked by quarrels and disagreeable scenes. Their parents were definitely incompatible. In terms of parental images many of the patients had a righteous, moral mother and a worthless father. Many of them were an only child, or the youngest or oldest in the family. Such children suffer from their family position either by too much attention or by intensification of the conflict between them and their siblings for the love of the mother.

From an early age there was a swing to delinquent behavior despite the mother's efforts at control. There was definite identification with the father image and a reaction to maternal control. This caused delinquent behavior in school and anti-social activities, as well as avoidance of responsibilities. Undesirable associates, sex promiscuity, truancy and even addiction to marihuana are typical in the school years.

The pattern established is very well described by Marcovitz and Myers:

> A typical pattern of response to repeated situations of frustration and deprivation. This consists on the one hand of immediate and constant gratification of the need for sensual pleasure and for the feeling of omnipotence, as well as the need to overcome their unbearable anxiety. On the other hand they show hostility and aggression toward others, especially to authority with the neurotic repetitive creation of situations which lead to further sufferings.[13]

Their work records followed the same behavior pattern, with frequent changes of jobs. Associates chosen were always those with similar psychopathic interests. As adults, as in adolescence, sex satisfaction was the predominant drive. This was permitted expression through marihuana on various levels of development. The drug was also used to build up confidence in the conquest of women. Marihuana and sex satisfaction are definitely associated in these individuals. They revealed frequent attendance at private parties where there were both marihuana enjoyment and sexual orgies, with marihuana addiction the common bond among all present. Defiance of sexual codes with gratification of infantile sexuality at different levels was achieved.

Conflict with the law is an aspect of the psychopathic personality manifested by marihuana users. There is little evidence that marihuana creates criminals, but it does seem to restore the confidence which a criminal personality needs. The behavior of these addicts shows a disregard for law which is based on selfishness and resentment to authority.

Judging from the comments of the men studied, as well as from the analysis of their personalities, it seems that marihuana is used to restore confidence by the removal of anxiety and resentment, and that it also relieves actual physical feelings of depression and pain. The user gains both physical and psychological contentment and reassurance, finds himself able to gratify strong infantile desires, and becomes an adequate personality able to cope with his environment. Marihuana dispels feelings of anxiety resulting from earlier conflicting attitudes of the par-

[13] Marcovitz, *op. cit.*, p. 391.

ents, and thus permits the satisfaction of libidinal desires at various levels of infantile sexuality. Strong homosexual tendencies are also present in many addicts.

Summary

1. Sixty infantry soldiers, 55 Negro and 5 white, were studied to determine the basis for their addiction to marihuana.

2. Case histories reveal a background of psychopathic development and behavior.

3. Eighty-five percent of these men were referred for psychiatric evaluation because of poor records as soldiers, and the remainder for neurosis.

4. Median average age of the men was 22.4 years, and the median average length of service was 5.9 months. Only 2 men had desirable army records.

5. Thirty-eight or 63% had a history of homes broken in childhood by death, desertion or separation. Another 13 or 22% also had home environments where quarreling, domestic strife among parents was common.

6. Thirty-five percent were the only child in the family and 28% either the youngest or oldest in a large family.

7. Thirty-four of the men came from poverty-stricken levels.

8. Patients' memories of parents revealed 95% had mothers with high standards of morality and 68% had fathers of poor moral character.

9. Early childhood memories were of definite emotional strain, as revealed by frequent nightmares, history of enuresis, sleep disturbances, dizzy spells.

10. Only 11 of the men had gone as far as high school, although intelligence tests showed them all to be of normal intelligence.

11. Typical school behavior was one of truancy, arguing or fighting with teachers, gambling, sex promiscuity, associating with undesirable companions.

12. Work history shows a similar trend of psychopathic development with frequent changes of jobs and much unemployment, little desire to work. Marihuana was used frequently during work to relieve monotony.

13. Fifty had criminal records. Marihuana was used to furnish confidence but it was not the cause of criminal activity.

14. Strong abnormal sexual desires were present with an overlay of anxiety. Marihuana was used to remove anxiety and result was an over-emphasis on sexual pleasures on various levels of infantile sexuality.

15. Addicts associate only with other addicts and non-addicts are avoided. Recognition of other addicts is primarily by use of slang terms.

16. First attempts to contract the marihuana habit are believed to cause startling experiences but the user soon is able to control dosage and accustom himself to the drug to a degree sufficient to allay anxiety.

17. Six or 13% began use of the drug prior to adolescence; 29 or 64% started in the adolescent years, and the rest in early and late twenties. Median average length of addiction was 6 years.

18. Subjective effects of marihuana are described as tending to restore confidence, remove anxiety and eliminate physical pain.

19. Use of other stimulants with marihuana was common but marihuana is used as the primary pleasure. Quantity of marihuana cigarettes smoked daily is an individual matter but the majority used from 4 to 6 daily.

20. None of the men had any desire to be cured. Because of this, as well as their psychopathic background, prognosis for treatment is poor. They are a problem not only to the Army, but as patients in the Army hospital.

21. The personality pattern of these men is one of strong libidinous desires resulting from early home conflict, a weak ego which identifies with an undesirable father image, and a superego created by the moral mother. The superego is unable to prevent undesirable behavior but is able to create intense anxiety. Use of marihuana removes the superego which in turn strengthens the ego and enables it to satisfy the libidinous desires at various levels of infantile behavior. Homosexuality is evident in many of these men.

PSYCHIATRIC ASPECTS OF UREMIA[1]

A. B. BAKER, M.D., AND JULIAN KNUTSON, M.D.

Minneapolis, Minn.

It has long been recognized that in uremia there occurs an autointoxication that may result in damage to many of the body tissues. Since some of the most common symptoms in this disease, namely, the convulsions and the lethargy, indicate cerebral involvement, it at once becomes apparent that the central nervous system does represent at least one of the most important regions of toxic injury. The importance of the cerebral damage in uremia as related to the widespread clinical symptomatology was well recognized in the older literature, but seems to have been ignored in many of the recent writings (Hechst(1), Mikuriya(2), Hiller and Michalovici(3), Bodechtel(4), Weil (5), Weiman(6), Rives(7), Silvan(8), Uchida(9)).

In a recent investigation we had the opportunity of studying the brain changes in 7 cases of uremia. It was apparent that this disease produces severe and often irreversible changes within the cerebral tissues. The type of alteration varied with the duration of the illness. In the acute cases the predominant damage occurred within the neurons which showed the typical picture of acute nerve cell damage. In the subacute and chronic illness, the neurons revealed chronic changes such as pyknosis and fragmentation. In most of these cases parenchymal alterations were prominent and appeared as areas of tissue necrosis and demyelinization. It has been accepted that such extensive tissue damage might very well result in varying neurological disturbances such as convulsions, monoplegias, hemiplegias, ataxias, etc. Many reports of such dramatic disturbances are available in the literature (Rothman(10), Weisenberg(11), Boinet(12), Hiller and Michalovici(3)). However, in spite of the definite evidence of tissue injury in uremia, it has not been generally realized that these same diffuse alterations may so disturb cerebral function as to result in a host of personality disturbances that may obscure the underlying organic pathology. It is for the purpose of emphasizing these psychic alterations in this disease that the following case is reported followed by a brief résumé of some of the literature on this subject.

[1] From the Department of Neuropsychiatry, University of Minnesota. This study was aided by a grant from the University of Minnesota Graduate School.

Case Report

E. D. (H. N. 685285), a 27-year-old white male, was admitted to hospital August 29, 1939, because of disorientation, restlessness and bizarre behavior. This patient had always been a well adjusted, friendly individual. He had lived harmoniously with his family and friends, showing no abnormal moods or behavior. He had always taken part in church and social activities and had been a great help to his brother in business. During the past 4 years he had been troubled with epigastric distress for which he had taken soda for relief. Six months before admission he suffered a recurrence of his discomfort, vomited frequently and began to lose weight. In June, 1939, he was hospitalized and an x-ray revealed a duodenal ulcer. After leaving the hospital he did poorly as far as his ulcer was concerned in spite of exerting care as regards his food and general régime. In July, 1939, he continued to vomit almost daily, showing a weight loss of over 35 pounds. Aside from this weight loss he appeared and felt fairly well. He was again placed under medical care but continued to vomit.

On August 24, 1939, his local physician suggested hospitalization and the patient enthusiastically agreed to such a move. However, within a few hours he became slightly disturbed because he felt that "the papers would advertize about his receiving free aid." This was the first indication of any abnormality in thinking. Shortly afterwards "his nerves gave way." He began to weep and show mild catatonia, clenching his fists, drawing his knees toward his chin and remaining so for many hours. At times he would become restless and excited while on other occasions he would lie quietly in bed staring at the ceiling. He was immediately removed to a local hospital. During the first few days in hospital he behaved in a normal manner except for a slight restlessness which gradually increased in intensity. On the third day he became confused and expressed auditory hallucinations. He greeted his father by saying, "Come on let's sneak out now,"—"Don't you see them?" He

hugged his father tightly and repeated three times, "She thinks she's too good for me." Because of the increasing severity of his illness, he was transferred to the University Hospital. On his way to the hospital he became completely disoriented, mistaking the ambulance driver for his brother-in-law.

On admission, the patient appeared acutely ill, exhibiting evidence of marked weight loss, weakness and dehydration. His blood pressure was 112 systolic and 78 diastolic. He was very negativistic, mute and demonstrated some regressive behavior with fecal and urinary incontinence. On persistent questioning he would admit having stomach trouble and occasionally complained of abdominal distress. At times he would recognize his brother. He seemed markedly apathetic and totally indifferent to his surroundings. He spoke very little, most of his remarks being garbled and incoherent. He was somewhat restless, picking at his bedclothes and attempting to get out of bed.

At this time a diagnosis of schizophrenia was considered. Because of the medical history, complete laboratory studies were done. The urine showed a specific gravity of 1016 with a trace of albumin and an occasional red blood cell. Blood chemistries revealed a blood urea nitrogen of 243 mg. percent; a blood sugar of 140 mg. percent; and chlorides of 452 mg. percent. These findings indicated that we were dealing with an unusual form of uremic psychosis.

Due to the negativistic behavior of the patient, it was necessary to resort to gavage feedings. During the first 3 days in hospital he was restless and confused. He knew the approximate date and his name but was disoriented as to place. He talked very little, most of his conversation being muttered and unintelligible. He had to be restrained as he would try to get out of bed. He frequently spit his food at the nurses or over the floor of his room. Often he would become very negativistic and preoccupied. He would spend many hours posturing and grimacing. On the fourth hospital day, after intense intravenous and gavage feedings, the patient seemed to improve. He became more quiet and there was a definite clearing of the sensorium. His speech became more coherent and he again recognized various members of his family. He stated that he felt "swell" and "would like to go home." He conversed pleasantly with the nurses, toward whom he was most polite and cooperative. He remained improved for 2 days and then suddenly relapsed into his former psychotic state. He again became restless, noisy, and at times catatonic.

During the remainder of his hospital stay he continued to manifest severe psychotic behavior except for brief intervals during which he seemed to clear somewhat and make a few coherent and relevant statements. He expired suddenly from a respiratory paralysis 7 days after admission to the hospital.

Comment.—On cursory survey, this patient presented many features of a catatonic type of schizophrenia. These consisted chiefly of negativism, mutism, grimacing and regressive behavior. This diagnosis was considered until the blood chemistry was obtained, revealing a severe retention of metabolites. On retrospect there were certain features in this patient's illness that should have guided us in the proper evaluation of this case. These were: the presence of both delirious and schizoid symptoms; the rapid fluctuation between the psychotic and the lucid periods; and finally, the definite impairment in the patient's physical health. In fact, it was this latter observation that prompted us to study the blood chemistry.

Characterizing Features of Uremic Psychosis

The mental picture in uremia exhibits no specific characteristics. Almost every form of disturbance has been reported, although the delirium associated with a mild depression seems to predominate. In spite of this most variable symptomatology which frequently obscures the underlying pathology, certain characteristics may be present, which should suggest the possibility of a uremia and indicate a detailed laboratory investigation.

1. *A Rather Sudden Onset.*—In the majority of cases the psychosis is fairly sudden in onset, the entire illness unfolding during a period of hours. Usually the illness reaches its peak during the first 24 to 48 hours. Occasionally careful questioning may reveal vague signs of the impending illness for a few days prior to its acute appearance. These premonitory symptoms usually consist of a mild irritability, listlessness, insomnia and some tenseness.

2. *Poor Physical Health.*—This is an important feature and should strongly suggest some complicating factor in the psychosis. The patients frequently are very weak, fatigue easily, complain of malaise and lassitude and show evidence of great weight loss. Headaches are common and often very disturbing. Anorexia is often marked. The patient makes very little attempt at physical effort, appearing apathetic with little interest for his surroundings. In many such cases a careful history will reveal evidence of a long standing renal pathology.

3. *Frequent Remissions During the Course of the Illness.*—In many of the reported

cases, especially those receiving treatment, the psychosis was characterized by remissions during which the patient would be quiet, rather composed and entirely rational. These lucid intervals are most variable in both number and duration, lasting from minutes to days. They often appear dramatically at the height of the psychosis and disappear just as abruptly.

4. *Accompanying Neurological Features.*—The appearance of neurological disturbances during the course of a psychosis should immediately suggest the possibility of a uremic involvement. These disturbances consist of convulsions, myoclonus, monoplegias, ascending paralyses, bulbar disturbances, ataxias or amaurosis. Bischoff(13) reported motor involvement as occurring in 40 percent of the uremic psychoses. The motor involvement is frequently ascending in type, occasionally resulting in a bulbar palsy. The myoclonus occurs terminally and involves primarily the upper limbs. The convulsions are probably the most frequently recognized uremic symptom. They precede or accompany the psychosis and are usually generalized.

5. *Poor Prognosis With Rapid Downhill Course.*—As would be expected, because of the underlying disturbance, the prognosis is usually poor. The duration of the illness is fairly short, lasting but a few weeks and terminating fatally. Such a rapidly fatal course is unusual for most of the purely psychogenic disturbances and should suggest organic involvement.

6. *Blood Chemistry Studies.*—An investigation of the blood urea nitrogen level will almost always establish the proper diagnosis. Any patient suffering from a psychosis in which some of the above listed features are present, warrants an investigation of the blood chemistry in an attempt to determine the possibility of uremia as the causative factor in the illness.

Clinical Forms of Uremia

Aside from the above general features, the clinical symptomatology in uremia differs considerably from case to case. An attempt will be made to list the most common clinical syndromes along with the authors who described such cases.

1. *Asthenic Form* (Lemierre(14), van Hauth(15), Reiss(16)).

The chief symptoms are malaise and lassitude gradually progressing to lethargy. Physical fatigue is marked, the patient often staggering when walking because of lack of strength. Memory is poor, concentration is difficult and sleep is superficial. The patient can be awakened easily and answers questions slowly but rationally. Such patients often appear unhappy and utterly miserable. Terminally they may become mildly confused. The lethargy may pass into a coma which ends in death. Reiss(16) reported 6 such cases while Lemierre(14) recorded 2. In both of the latter the uremia was mild and the patients recovered completely.

2. *Acute Delirium* (Meninger(17), Reiss(16), Jacobson(18), Jolly(19), Bischoff(13), Marcus(20), Merklen(21), Kleudgen(22)).

This is by far the most common picture presented by patients with uremic psychoses. These patients are apprehensive, restless, bewildered and confused. They may be quiet and muttering or may show a severe acceleration of psychomotor activity with periods of excitement which may terminate in exhaustion. Hallucinations are frequent, fleeting and often terrifying in nature. They usually involve the auditory and visual spheres. The mood is changeable, occasionally being happy but more frequently revealing a marked anxiety accompanied by hypochondriacal complaints. Delusions when present are transient and persecutory and self-condemnatory in nature. Speech is frequently slurred, mumbled and incoherent, often shifting from mutism to marked flight with rambling. The entire course of the illness may shift rapidly from states of overactivity with aggressiveness, crying, laughing, singing, dancing and swearing to states of lethargy with incoherent muttering, self-condemnatory delusions, mutism, or even catatonia. Brief lucid periods may appear throughout the illness, passing abruptly into the psychosis. Accompanying neurological disturbances were reported by Bischoff(13), Marcus(20), Merklen(21), and Kleudgen(22). These disturbances were not consistent. Marcus observed convulsions; Merklen, myoclonus; Kleudgen, paralysis; and Bischoff an amaurosis. The course in

this form of the illness is variable, most of the patients passing from a state of exhaustion into a coma which terminates fatally (Reiss(16), Jacobson(18)). Some patients after a stormy course tend to recover. In such cases, convalescence is very slow and some symptoms may persist for many months. Jolly(19) reported a case of acute uremia in which the kidney function returned to normal 2 weeks after the onset of the illness, but the mental symptoms persisted for over a month. In Marcus'(20) patient, memory weakness was still present 10 months after the acute illness.

Not infrequently this delirious form of uremia is accompanied by features which are definitely schizoid in nature. These symptoms will be discussed under the schizophrenic form of this disease.

3. *Schizophrenic Form* (Grimshaw(23)). Grimshaw reported a case of a 25-year-old male who suffered from a chronic uremia. This patient showed marked catalepsy associated with periods of catatonic excitement. His limbs would remain for long periods in whatever position they were placed regardless how awkward. Negativism was present, the patient refusing to eat. Pinching and pricking of the hands and arms were unnoticed. Even applications of an electric brush seemed to produce but slight effect on the upper and lower limbs. On occasions the patient would arouse from his catatonia and mumble a few oaths. His conversation on such occasions was often obscene or very religious. The patient gradually became more debilitated and died. Terminally he had some oliguria.

Frequently many of the schizophrenic symptoms appear to color the other clinical forms of uremia. These symptoms consist of negativism, catalepsy, grimacing, posturing, echolalia and bizarre auditory hallucinations. Bischoff(13) felt that when these symptoms accompanied the psychosis they were not due entirely to the uremia but were chiefly the result of a "taint" within the patient's make-up and that careful questioning would elicit the basic taint within the patient or the family background.

4. *Depressed Form* (Cullerre(24)). This form is characterized by a melancholia often associated with suicidal trends. There may occur only a simple depression associated with ideas of persecution, self-condemnation and apprehension. At times these patients may show extreme anxiety with marked motor excitement and rapid physical prostration. There may exist a fear of poisoning or death, or a desire to run away. In the two cases reported by Cullerre, the course of the illness was rapidly downhill, both patients lapsing into coma prior to death.

5. *Manic Form* (Scholz(25), Hagen (26), Wilks(27)).

These patients are markedly overactive, combative and destructive. They frequently laugh, sing, yell or chatter continuously, often in a boisterous voice. They may tear their clothes or the bedclothes or may break the furniture. Usually the sensorium is clear in spite of the psychomotor overactivity. They frequently become feeding problems as they are too busy to eat. Fleeting hallucinations may be present. At times the overactivity is suddenly interrupted by brief periods of depression during which the patient is gloomy and despondent. All the cases reported terminated fatally. In 2 of the 3 cases reported by Wilks there were associated convulsive seizures.

6. *Paranoid Type* (Hoesslin(28)).

Hoesslin reported a case of a 46-year-old male with chronic nephritis who suddenly developed expansive ideas. He believed that he belonged to nobility and was having conferences with kings. These delusions of grandeur continued for days. The patient suddenly recovered from his psychosis and was much distressed over his former ideas.

Summary and Conclusions

1. Uremia may result in irreversible damage to the central nervous system. These tissue changes may so disturb cerebral function as to result in a host of personality disorders.

2. A case of uremic psychosis is reported occurring in a 27-year-old male who had a blood urea nitrogen of 243 mg. percent.

3. Clinically a uremic psychosis may resemble almost any of the recognized varieties of the psychoses.

4. Certain features, when associated with any of the clinical forms of this illness, aid greatly in the diagnosis. These consist of: a rather sudden onset; poor physical health of the patient; frequent remissions during

the course of the illness; associated neurological findings; and a poor prognosis usually with a lethal outcome.

5. A review of the literature is attempted with a listing of the types of clinical pictures described by the various authors.

BIBLIOGRAPHY

1. Hechst, B. Über Gehirn Befunde bei urämishen Zustände. Ztschr. f. d. ges. Neurol. u Psychiat., **139**: 544-588, 1932.

2. Mikuriya, J. Hirnveränderungen bei der Urämie. Fukuoka acta med., **32**: 107-108, 1939.

3. Hiller, F., and Michalovici, E. Lésions organiques cérébrals au cours d l'uremia. Schweiz. Arch. f. Neurol. u Psychiat., **46**: 203-215, 1941.

4. Bodechtel, G. Hirnveränderungen bei den verschiedenen Formen der Urämie unter Berüchsichtigung ihrer Pathogenese. Deutsch. Arch. f. klin. Med., **174**: 541-569, 1933.

5. Weil, A. Textbook of Neuropathology. Philadelphia, Lea and Febiger, 1933.

6. Weiman, W. Handbuch der Geisteskrankheiten, edited by O. Bumke, pp. 84-86, Berlin, Julius Springer, 1930.

7. Rives, J. Lésions architectoniques de l'écorce cérébrale chez les uremiques convulsifs et dans la senilite. Folia neuropath., **1**: 96-104, 1923.

8. Silvan, C. Contributo allo studio dell' anatomia patologica del sistema nervoso nell' uremia in un caso simulante paralisi del vago. Riv. di pat. nerv., **17**: 410-424, 1912.

9. Uchida, quoted by Hechst.

10. Rothman, M. Über die transitorische Erblindung bei Urämie. Klin. Wchnschr., **31**: 691, 1894.

11. Weisenberg, T. H. Uremic hemiplegia with changes in the nerve cells of the brain and cord and recent primary tract degeneration of one central motor tract. J. Nerv. and Ment. Dis., **31**: 456-464, 1904.

12. Boinet, W. De l'hémiplégie uremique. Neurol. Centralbl., **13**: 229-230, 1894.

13. Bischoff, E. Ueber die urämischen Psychosen. Wien. klin. Wchnschr., **11**: 601-608, 1898.

14. Lemierre, M. A. Azotemie et troubles psychiques. Bull. et mém Soc. méd. d. hôp. de Paris, **47**: 1377-1382, 1923.

15. van Hauth, P. Die psychotischen Bilder der Urämie. Allg. Ztschr. f. Psychiat., **78**: 64-89, 1922.

16. Reiss, E. Die psychotische Urämie und die Mischformen. Ztschr. f. klin. Med., **80**: 424-451, 1914.

17. Meninger, K. A. Paranoid psychosis with uremia. J. Nerv. and Ment. Dis., **60**: 26-34, 1924.

18. Jacobson, D. E. Ueber Autointoxication—Psychosen. Allg. Ztschr. f. Psychiat., **51**: 383-388, 1895.

19. Jolly, F. Ein Fall von Geistesstörung mit akutem Morbus Brighti. Klin. Wchnschr., **21**: 241-244, 1873.

20. Marcus, E. Frühzeitige Urämie mit Tobsucht bei Scharlach. Klin. Wchnschr., **40**: 584-585, 1877.

21. Merklen, M. M. Nephrite azotémique; confusion mentale azotemique; uremie musculaire; excitabilité neuro-musculaire et acidose. Bull. et mém Soc. méd. d. hôp. de Paris, **49**: 812-820, 1925.

22. Kleudgen, Dr. Psychische Symptome bei chronischer Nephritis. Deutsche med. Wchnschr., **26**: 445-446, 1886.

23. Grimshaw, T. W. A case presenting cataleptic symptoms. Dublin J. Med., **59**: 349-355, 1875.

24. Cullerre, A. Délire aigu et urémie. Arch. de neurol., **12**: 449-452, 1901.

25. Scholz, Dr. Ueber Geisteskrankheiten nach Bright'scher Nierenentartung. Klin. Wchnschr., **41**: 588-591, 1876.

26. Hagen, H. Ueber Nierenkrankheiten als Ursachen von Geisteskrankheit. Allg. Ztschr. f. Psychiat., **38**: 1-34, 1882.

27. Wilks, S. Mania as a symptom of Bright's disease. J. Ment. Sc., **20**: 243-245, 1874.

28. Hoesslin, R. Ueber psychische Erkrankungen bei chronischer Nephritis. München med. Wchnschr., **36**: 717-718, 1889.

THE LIFE AND WORK OF KARL WILMANNS

ERWIN STRAUS, M. D., Baltimore, Md.

Word has reached us that in August 1945 Karl Wilmanns died, 72 years of age. For the last years he lived at Wiesbaden, where he had taken refuge after being forced by the Nazis to leave the university and the town of Heidelberg. A few weeks before his death he received a letter from the newly appointed rector of the university, asking him whether he was willing to return to Heidelberg and to assume for a while, in spite of his years, the burden of his former position. Although he was not able to accept this offer, it brought him, in the midst of the German disaster, some belated personal satisfaction. He had foreseen the catastrophe the Nazis would bring about; he had also foretold it, even to those who did not like to hear it. But perhaps they did like it, for it provided them with the welcome opportunity to get rid of a man, whose ironical criticism they had to fear.

Wilmanns was born July 26, 1873, at Durango in Mexico. In 1879 his father, a businessman, returned to Germany with his family and settled at Bremen. This town lent Wilmanns a definite color. Throughout his life he remained a Northerner, contrasting strongly in dialect and gestures with his south German environment. Also his attitude towards authority, a peculiar mixture of respect and disdain, had some Bremish flavor. The "Hanseates" liked to emphasize their personal independence, yet this independence was integrated into a proudly guarded tradition.

Wilmanns' education followed the typical pattern, with one exception: he stayed through all the years of his academic studies—in contrast with the German custom—at one place, at Bonn. One may find in that early period already the beginning of a conservative attitude which became more and more obvious later on. With a stubborn tenacity Wilmanns stuck to plans in which he had early invested his personal interest. Just as he had remained at Bonn during all the time of his medical studies, Wilmanns, who came to Heidelberg as one of Kraepelin's assistants, stayed there through all the stages of his academic career; there he became instructor, assistant professor, and in 1918 full professor. He succeeded Nissl, who had accepted a call from Kraepelin to the "Forschungsanstalt" in Munich.

The most striking example of Wilmanns' indefatigable thoroughness is to be found in his psychiatric work. The problem he had taken up as a staff member in Kraepelin's Clinic—the psychopathology of hoboes—remained the chief theme throughout his life, into the last years of his scientific productivity. In 1906 he published in a voluminous monograph "Zur Psychopathologie des Landstreichers," the first results of his research. In 1940, in two papers, the last ones as far as I know, he wrote about "Morde im Prodromalstadium der Schizophrenie," and about "Das Vagabundentum in Deutschland" (the vagrants in Germany). During that period of 35 years Wilmanns continued to discuss his favorite topic. His active interest never flagged; research and publications did not cease. New experiences were added, the scope of investigation extended, the problem was approached from all possible points of view, psychiatric, legal, historical. All his work was organized around this one center, with only one deviation.

Through historical and ethnological studies Wilmanns came to assume that the chemotherapy of syphilis was a decisive factor in the pathogenesis of general paresis. It seemed to him that in countries where syphilis was treated less early and less intensively than in Western Europe and in the U. S. A., tertiary symptoms were more frequent but cases of general paresis were rare: ergo antiluetic therapy breeds metalues. In 1926 a group of psychiatrists, dermatologists, serologists, went to the Burjatian Republic (U. S. S. R.) where syphilis was endemic, but where modern chemo-therapy was unknown. His leading hypothesis was not confirmed. A thorough investigation revealed that the number of metaluetic cases was

higher than the presupposition of Wilmanns' syllogism had allowed for.

In his basic research on tramps Wilmanns had, compared with the majority of psychiatrists, one great advantage. While they, as a rule, had come to know hoboes only as inmates of jails and mental hospitals, Wilmanns studied them, like a modern cameraman, outside of confinement, under their own peculiar conditions of life, which, although not normal conditions, were natural to them.

In the paper on "Das Vagabundentum in Deutschland" (1940), which contains many personal confessions, Wilmanns tells us, how in the Bremen State Hospital his attention was called "to some interesting tramps," how Bonhoeffer's investigations on that subject increased his interest, and how finally during his own research at Heidelberg he became more and more fascinated by this topic. "The long conversations" he wrote in 1940, "with the inmates of the Kislau house of correction (Arbeitshaus) gave me the opportunity to gain a deep insight in the life of the hoboes. . . . . One of them used to visit me frequently. . . . . Some of the tramps made, so to speak, friendship with me. Others heard about it, so that beggars in increasing number came to convey to me the compliments of the others. I often received postcards from them with thanks and greetings. . . . ." One among them, "a professional tramp" wrote on Wilmanns' suggestion a thorough paper about vagrants, illiterate in style, but keen in observation. There he described the different types with their self-given names, their special tricks of "making money," their hunting grounds, their relations to law and police, their conventions. This man in turn suggested to Wilmanns to participate in one of their "annual meetings" which occurred at some small village in Franconia during the hop harvest. It was not very long until Wilmanns was recognized by one of his former patients; but he was allowed to stay on. In his paper Wilmanns goes on with a description of the convention, mixing it with statistics of the register of punishments of the participants. He sums up his observations, half graciously, half ironically: "in short, it was a beautiful feast." Wilmanns acquired even some knowledge of the peculiar idiom, the "Jenish," spoken by the tramps. If every language gives an interpretation of the world, the "thieves' Latin" gives its re-interpretation. The outcasts develop a vocabulary of their own, in which they give new names with a positive emotional evaluation to the very things and actions condemned and persecuted by the in-group. In studying the "Jenish" Wilmanns learned to meet the tramps on their own ground, to see the world through their spectacles, to tolerate their standards for a while. Here we may recall that Prince Henry enjoyed for some years Falstaff's company; but when Henry had become King, he banished the man "so surfeit-swell'd, so old, and so profane," granting him a wise allowance for his maintenance, and promising "advancement" in the case of "reform." We would say today he put him on probation, the outcome of which was clear to everybody. As, through Falstaff, Henry had gained insight into the problematic character of all human institutions, so the more deliberately he took charge of the duties fate had assigned to him. There is nothing in Wilmanns' works indicating that King Henry's decision would not have met with his full approval.

In Wilmanns' writings one does not find much of the solemnity of a state attorney or judge, nor of the zeal of geneticists, who persecute and stigmatize the degenerates; but one would also search in vain for the sentimental gesture of understanding, explaining and pardoning everything. Wilmanns saw the tramps as a variety of the human species, shaped by heredity and milieu. He would not have asked the author or stage director of the human comedy to cut out their part, but he clearly saw the subordinate rôle they played in the whole drama. In his judgment Wilmanns firmly and unambiguously accepted the established conventions. He never turned into a social reformer.

We still have to consider Wilmanns' work, detached from his personality. The goal of the first investigations was to study the relations between the natural disposition of the hoboes, inherited or acquired, and their conduct of life. Wilmanns started from

the assumption that in many cases mental changes caused the instability. He tried to show how "the psychosis had influenced the development, growth, and final disaster" of the tramps. Convinced of the paramount rôle schizophrenia played in these and similar cases, he took a special interest and active part in the clarification of the clinical picture of schizophrenic psychoses, their early symptoms and diagnosis.

His broad knowledge of the initial stages, enabling him to recognize prodromal stages of schizophrenia, where others still refused to see a psychotic process, brought him, as expert, in frequent conflict with the courts, administrations, public opinion, and also with other experts. In a great number of cases his judgment was justified by the final outcome. As an expert Wilmanns spoke and wrote with great passion. He was careful to protect the insane against unjust punishment and useless legal procedures, where psychiatric treatment could, if not cure, at least improve the conditions to the benefit of both individual and society.

Wilmanns did not assume that every tramp was schizophrenic, but he was convinced that in the great majority the other cases were conditioned by either feeblemindedness and other deficiencies or by psychoses, apart from schizophrenia, mainly by epilepsy and cyclothymy. Alcoholism was a result more than a cause. Wilmanns was well aware that his conclusions could not be generalized, that they were valid under the social, economic and political conditions of Germany at the time of his inquiry. From historical studies he knew how political events and social changes have influenced the number and personality structure of vagrants.

From the nucleus of his early investigations Wilmanns extended his research in the most consistent manner. He took up one problem after the other. In 1908 he wrote a monograph on prison psychoses, followed by a study of the history of the prison psychoses, with P. Nitsche as co-author. This book has also been published in an English translation (New York, 1912). The first World War, and the following stormy years interrupted the series of larger publications. Wilmanns had to carry an enormous burden of administrative and practical work. He resumed publication on a larger scale in 1927 with a book entitled "The Socalled Diminished Responsibility." (Die sogonannte verminderte Zurechnungsfaehigkeit). In this book Wilmanns discussed the problem which was in the focus of public interest as it had been planned to introduce the concept of "diminished responsibility" into the Penal Code. Wilmanns did not favour the innovation; in a broad discussion of all pros and cons he gave his reasons. The theme of the book has lost its timeliness, but not the book itself. It is a model of monographic presentation, one central problem being followed up in all its ramifications.

Wilmanns name will remain connected with another monograph, although not written by him. Under his editorship members of the staff of the Heidelberg clinic wrote the volume "Schizophrenia" in Bumke's Handbook of Psychiatry (1932). In the preface Wilmanns formulated the general points of views accepted by himself and his collaborators. "We do not take the symptom groups denoted as schizophrenia, for the expression of *one disease entity*. . . . . We can compare our knowledge of schizophrenia in its present stage with that of general paresis at a time when certain physical signs were not yet known. It was clear to us that the term general paresis comprised a variety of diseases but we did not doubt that the nucleus was an entity. Similarly we believe that the nucleus of all the cases we comprehend today under the title schizophrenia has to be seen as one essentially *uniform* disease, in spite of the variety of symptoms, developments and final states. We assume that schizophrenia is an endogeneous disease, organic or toxic, its origin unknown." The monograph was the result of teamwork; most of its writers are psychiatrists well known beyond the German frontier. I mention only the names of Homburger, Mayer-Gross, Beringer, Gruhle, Wetzel, Steiner, A. Strauss. The book is characteristic of the spirit of the Heidelberg Psychiatric Clinic under Wilmanns administration. There was a group of scientists, independent in their opinion, free in their expression, united by a common enthusiasm, stimulated by their controversies, but cooperative in their work. The investigation

of the postencephalitic psychoses, the studies of mescalin and hashish intoxications are typical results. They bear the stamp of the Heidelberg school; accuracy in detail, broad clinical experience, intimate knowledge of the literature, a wide horizon of inquiry, all of them qualities characteristic for Wilmanns' own work and personality. He belongs to an epoch when in Germany the power of the state and the freedom of the individual were still balanced, when the psychiatrist was still considered the helper not the jailor of his patients, when there was still room for the sick and the eccentric, because there was a general appreciation of the limitations of all human beings, one group not yet claiming to be absolute, one man not claiming to be God.

THE SALMON MEMORIAL LECTURES, 1945

The Biology of Schizophrenia

ROY G. HOSKINS, Ph.D., M.D.

Research Associate, Harvard Medical School, Boston; Director of Research of the Memorial Foundation for Neuro-Endocrine Research and of the Worcester State Hospital

These three lectures on schizophrenia, aimed at a biological appraisal of this disease, summarize a portion of 18 years of research conducted by the Worcester group of scientists under the direction of the lecturer. Studies at the physiological level receive chief attention. The general over-all meanings of the studies and suggestions for further research are emphasized.

Schizophrenic distortions of personality are almost as varied as the manifestations of human nature itself. The approach to this problem must be directed to three goals: the nature of man, the nature of the distorting forces, and the detailed picture of the distortions.

In the first lecture, "The Biology of Man in Relation to Schizophrenia," a general review of the fundamental philosophical and scientific concepts contributing to the understanding of man is presented in detail. In unfolding the panorama of our fundamental knowledge of different organization levels (electronic, atomic, molecular, and especially the level of consciousness) the lecturer is dealing with the problems of colloids, enzymes, vitamins, hormones, protoplasm, animal structural patterns, reproduction, heredity, drives, instincts, conditioning, symbolization, consciousness, affect, psychoanalytical concepts, etc. Each level of organization possesses unique properties of structure and behavior which are not a simple collection of properties of constituent elements. Each level requires appropriate methods of research. The distortion of schizophrenic personality can be examined at each level. Special emphasis is placed on the disorder of empathy, which refers to co-identification in a social group, especially within the family. In addition to its social value, the individual benefits of empathy should be stressed, particularly its tendency to drain individual emotivity. The development of empathy is connected, too, with the development of libido and sexuality. The schizophrenic psychosis represents the failure or distortion in the course of the evolution of man, his empathy, his sexuality. The malintegration may be conceived at any level from the atomic to the social.

In the second lecture, "The Pattern of Schizophrenia," the clinical manifestations of the disease are then depicted. Vocational, social and sexual failures were registered in the pre-psychotic histories of most of the patients, so that they represented vulnerable personalities. The lecturer describes at first the objectives characteristic of the disease and then gives a detailed picture of what psychosis means to the patient. A profound sense of personal failure conditions an intolerable loss of self-respect and stimulates different types of reactions: phantasies and dreams; delusional misinterpretation for "face-saving"; panic states. Practically nothing in this picture can be found in other orders of creation lower than man. On the human level, normal childhood and dreams offer most analogies with the psychosis.

In the third lecture, "A Biological Appraisal of Schizophrenia," detailed results of physiological studies are summarized. No significant general endocrine factors were uncovered, although about ten percent of patients presenting hypothyroid condition, in which the triad—low oxygen consumption rate, secondary anemia and scanty, nitrogen-low urine—are prominent, benefit from thyroid medication. The oxygen metabolism is definitely disturbed (average basal metabolism rate is -12). This suggests a defective enzyme mechanism. Glutathione is used to excess in schizophrenic patients. They respond less than normally to dinitrophenol, adrenin and insulin. There are distortions of Exton-Rose reactions to administered

sugar, tendencies to hypotension and a "robot type" solidarity between variations of systolic and diastolic pressures as well as of oral and rectal temperatures. The arm-to-carotid circulation time is increased. There is a suggestion of organic changes in the vestibular apparatus. Fifty-five percent of patients are underweight. Several blood vitamins are below the normal level. There is sluggishness of colon. The urine output is twice that of the controls. In addition, the variability of these and other physiological indices is significantly higher than in the controls.

In conclusion, schizophrenia is marked by numerous defects of adaptive efficiency, leading to inadequate responses to stimuli. Defective homeostasis may be one of the manifestations of the immaturity of these patients, which is considered throughout the three lectures as one of the most outstanding features of the disease.

These Salmon lectures were delivered by Dr. Hoskins at the New York Academy of Medicine, November 2, November 9 and November 16, 1945. They will appear shortly in a volume to be published by the W. W. Norton Company under the title, "The Biology of Schizophrenia."

REPORTS OF COMMITTEES

Report of the Special Committee of The American Psychiatric Association, Held at the Netherland-Plaza Hotel, Cincinnati, Ohio October 27-28, 1945

It will be helpful in the consideration of the report about to be given to review the history of the committee offering the report from the time of its inception.

At the meeting of The American Psychiatric Association in Philadelphia in May, 1944, a resolution was offered to the Council signed by a number of older members of the organization urging that an improved plan of cooperating with the medical departments of the Army and Navy be worked out in order to enhance the usefulness of our Association to the war effort. It was too late for the Council to take action on this resolution at that time.

At the December, 1944, meeting of the Council this same idea was presented by several members of the Council and by invited guests, including General William C. Menninger. The latter, in particular, urged that certain functions of the Association be expanded so as to make provision for needs felt by the Army relating to psychiatric problems during the war and in the postwar period. This idea was taken up by several members of the Council and enthusiastically endorsed. A resolution was passed authorizing the President to appoint a committee to consider ways in which the structure of the organization might be altered to provide better machinery for meeting the responsibilities of an expanded program.

Attached to this resolution was the specific suggestion that a medical director be selected. This specific assignment caused the committee considerable embarrassment since, after long deliberation during which the committee had the benefit of the counsel of the Executive Assistant, Mr. Austin Davies, it was the conclusion of the committee that this would not be a feasible step.

On the other hand, the committee felt it to be the import of their assignment to make proposals to alter the structure of the organization so as to make it possible to provide greater realization of the ideals, purposes and objectives to which our Association is dedicated, for the execution of which, according to the present constitution, the President alone is responsible. The committee felt, however, that the proposed changes would necessarily involve changes in the constitution and thus were not strictly or immediately within its authority or wisdom.

At a special meeting of the Council held in Chicago on January 31, 1945, the committee made its report, stating the above conclusions and then making the following suggestions:

The committee suggested that without altering the present constitution it might be possible to employ a number of full-time men to administer and execute certain functions, including those of creating better public relations and providing for popular education; improving psychiatric education; establishing clinical standards in hospitals, clinics, universities; stimulating scientific investigation, research, publications, etc. Attention was called to the fact that such an expanded program would require provision for financing, either through increased dues or contributions. It was suggested that funds from outside the organization might be obtained.

The committee further recommended at that time that its personnel be enlarged to include a number of outstanding members of the Association, particularly Dr. Alan Gregg, Dr. Robert H. Felix, Dr. Frank Fremont-Smith, General William C. Menninger, Captain Francis J. Braceland, and Dr. M. A. Tarumianz.

This report provoked considerable discussion from the Council, and it was finally accepted with practically unanimous approval. The expressed wish of the committee to resign was rejected by the Council. The Chairman of the committee explained that the task involved was a prodigious one and certainly deserved the employment of some full-time assistants or at least the help of certain experienced counselors.

The Council did not see fit to enlarge the committee but made an appropriation which the committee was authorized to use in order to obtain expert advice. These funds were called upon to a limited extent (total of less than $500.00 being expended) in solicitation of the opinions and advice of numerous persons consulted, among whom were the following:

James Hamilton, Administrator, New Haven Hospital, New Haven, Connecticut, Past-president American Hospital Association.
Claude Munger, M. D., Administrator, St. Luke's Hospital, New York City.
George Bugbee, Executive Secretary, American Hospital Association, Chicago.
Malcolm MacEachern, M. D., Director, American College of Surgeons, Chicago.
Maurice Norby, Research Director, Commission on Hospital Care, Chicago.
Commander Arnold Emch, Administrative Assistant to Surgeon General McIntire, and formerly Assistant Executive Secretary, American Hospital Association, Washington.
Michael Davis, expert on medical economics and professional organizations, New York City.
Howard Russell, Director, American Public Welfare Association, Chicago.
Frank Bane, Director, Council of State Governments, Chicago.
John R. Stone, Business Manager, The Menninger Clinic, Topeka, Kansas.
William L. Benedict, M. D., Executive Secretary, American Academy of Ophthalmology and Otolaryngology.

The suggestions and counsel of these advisers were taken into consideration by the committee, as were certain other data shortly to be mentioned.

Additional data which were considered by the committee were: (a) the private opinions offered in personal communications by a number of members of the Association including the President; (b) the responses from a small percentage of the membership received to a mimeographed letter signed by the committee and sent to all members of the Association in April, 1945.

The basis for the distribution of this letter was as follows: Prior to the meeting of the Council in Chicago in January, 1945, there appear to have been a number of rumors abroad to the effect that a small group of dissatisfied members were undertaking to initiate a reform and reorganization of the Association. In response to these the committee asked that its membership be enlarged and regretted the Council's decision not to enlarge the committee.

To counteract the misapprehensions of a small minority of the membership, to inform all members of the organization, and to overcome in some degree the lack of representativeness of the committee, the letter mentioned was sent to all members in April, 1945. This letter reviewed the history of the appointment of the committee and summarized the discussion of the committee thus far; mentioned the fact that the committee did not concur that it was feasible to appoint a medical director; suggested the possibility that a number of executive secretaries might be appointed to carry out certain functions; raised the question as to whether or not such an expansion was desirable and how it might be financed; and ended by requesting that each member of the Association write to the committee and express himself with respect to certain questions.

Certain questions were formulated after conference with a considerable number of members of the Association. These were as follows:

(a) *With what features of the Association are you personally most dissatisfied?*
(b) *What specific suggestions have you for improving the Association?*
(c) *Are you in favor of an expanded program assuming that it will cost you something in the way of increased dues?*
(d) *What direct personal benefit would you hope for as a result of such an increase in your dues?*
(e) *Would you be inclined to favor regional groups and regional meetings within the Association in order to facilitate program presentations, personal contacts with officers, et cetera?*
(f) *Would you welcome a more frequent and effective means of intercommunication through a fortnightly bulletin?*

To the dismay of the committee approximately 92% of the membership of the Association made no reply to this letter. Since the data taken into consideration by the committee included the replies from only approximately 8%, we would like to present a general summary of this material with some specific examples of the replies received.

Expressions of opinion were received from 244 members of whom 42 were Canadians. There were 128 letters from individual members and 3 letters in which the views of a total of 116 other members were expressed. One of these letters contained the view of 39 Canadian members; a second letter expressed the views of 17 members in private practice in Baltimore; a third letter expressed the views of 60 members of the Philadelphia Society.

Of the 128 letters received from individual members, 28 were from members working in state hospitals, 43 from members in the private practice of psychiatry, 22 from members serving with the armed forces, 9 from members working in private mental hospitals, 12 from members working in veterans' and Government hospitals, 5 from members working in child guidance clinics, and 2 from members working in health departments.

Concerning question (a) *"With what features of the Association are you personally most dissatisfied?"*, 76 out of 128 individual members definitely expressed dissatisfaction, 29 expressed no dissatisfaction, and 23 made no comment. The views of the 116 members expressed in three letters for the most part showed no dissatisfaction with the status quo, while the majority of the individual letters favor a change. If individual and group opinions are combined, it would appear that they are equally divided.

Concerning question (c), *"Are you in favor of an expanded program assuming that it will cost you something in the way of increased dues?"*, 87 out of 128 individuals favored expansion; and of this number, 81 favored increasing dues to accomplish this end; 22 were opposed to it, and 19 made no comment. In contrast to these views expressed in individual letters the opinions expressed in the group letters were in the main opposed to expanding and increasing dues.

Concerning question (d), *"What direct personal benefit would you hope for as a result of such an increase in your dues?"*, practically all members who replied neither expected nor desired personal benefit but considered only the general good which might result.

Concerning question (e), *"Would you be inclined to favor regional groups and regional meetings within the Association in order to facilitate program presentations, personal contact with officers, et cetera?"*, and question (f), *"Would you welcome a more frequent and effective means of intercommunication through a fortnightly bulletin?"*, the majority who replied were in favor of having both regional groups and meetings and having a fortnightly bulletin or more frequent publication of the JOURNAL.

The following sample letters present typical replies on both sides of the various questions:

> "In the circular letter issued by the Special Committee on Reorganization, you ask for the comments of members of the APA upon six specific questions.
>
> "To those questions I comment to the effect that there are no features of the APA with which

I am dissatisfied. I am not in favor of an expanded program but I do not object to any increase in the dues if the Association needs the money. I do not think any benefit would accrue to me, and, to the majority of the members, as a result of the increase in dues. Perhaps some benefit might be had from regional groups and regional meetings. I do not think we have sufficient worthwhile material to justify a fortnightly bulletin.

"In other words I do not want to see our Association materially altered. I think it is a grand, fine, old respectable organization. I do not want to see it become a chest-thumping body."

* * * *

"I am very much opposed to the proposals for a full time medical director and several other full-time officers involving a large increase in annual fees.

"Our Association has no hospitals or clinics or laboratories to direct and I see no purpose in a full-time director. Our office expenses in New York are, I think, sufficiently heavy and can well perform all the secretarial duties that might be expected to devolve on such an office. The President and Council and Committee Chairmen are all well qualified for the duties assigned to them and I do not think they should be deprived of the responsibility for the development of our Association and of psychiatric thought on this continent. The American Psychiatric Association should keep the concepts of democracy clearly before it and certainly should not surrender its democratic prerogatives in favor of a paid director who presumably would then do all our thinking for us."

* * * *

"These changes are in the direction of making the American Psychiatric a totalitarian rather than a democratic institution and are along the lines followed in the totalitarian countries prior to the opening of the present conflict.

"I am unalterably opposed to any increased centralization and I do not think any increase in fees is justified at the present time. Most of the members in Canada are in the Government service and our net salaries after the payment of income tax are at their lowest ebb for many years. The proposed increases of fees for the Psychiatric Association would be a real hardship."

* * * *

"I have no hesitation in stating that I am quite opposed to the proposed appointment of a full-time Medical Director and other full-time officers of the American Psychiatric Association if such appointments are to result in greatly increased yearly dues for membership in the Association. I would expect that if such a step is taken, there will be very few Canadians continue their membership and I, for one, would almost certainly resign."

* * * *

"I can not see, personally, where proposed changes are going to do anything except to provide jobs for several people and certainly at the present time, with the shortage of both senior and junior men, I think it highly inadvisable that any proposals of this nature should be considered."

"I find myself in complete ignorance as to what the Special Committee of the American Psychiatric Association expects to achieve by its proposed new plan. For this reason it is almost impossible for me to decide whether or not an increase in dues would be advisable at this time.

"I think the matter should be made much clearer to the various members before any radical changes are made."

* * * *

"We would like to go on record as *not* being favorable to the proposals to the American Psychiatric Association advising a medical director and other full-time officers, or of any increase in dues.

"We would rather see the American Psychiatric Association advance and develop along its present lines. Anything savouring of high pressure salesmanship, radical ideas or too much psychoanalysis, etc., may only damage psychiatry in the eyes of the rest of the medical profession and the public."

* * * *

"The feature I am personally most dissatisfied with is the lack of rapport between the Association and its members and the public. Aside from the Magazine and the Conventions I wouldn't know the APA exists. That brings up the matter of how to improve the Association. I believe it ought to be directly concerned with psychiatric education and standards in medical schools and particularly in state hospitals. The care of mental patients in these hospitals is primitive and I believe a disgrace to right-thinking psychiatrists. There should be direct supervision of these hospitals and, where political control obviates it, means should be taken to effect a change. Next comes public education. In my experience, I find that in general psychiatry is held in low esteem and repute by both the public and general practitioners. For that reason we are not consulted when we can be of the most use. We are avoided and mental illness is still looked upon as a stigma and something to hide. A regular series of educational articles could be run in national magazines. A model would be similar to those advertised by Parke-Davis Company—the patient who called his doctor when he had a pain in the belly and the one who didn't but is now convalescing from peritonitis; the patient who saw his doctor when he first developed a cough and the one who didn't, but is now spending his days in a Tbc sanitarium; etc.

"I am in favor of an increase in dues provided it results in an expanded program. The satisfaction I would get would come from the attempt at accomplishment of these suggestions. I would also be in favor of regional groups and meetings, but not so frequently that they would lose their zest. A bulletin, such as the present notice, giving forth the work of the Association, say every 3 months, would be appreciated."

* * * *

"In reply to Dr. Karl Bowman's letter of April 9th, I would like to offer my views. My chief point of dissatisfaction lies in the feeling that the APA is not truly representative of enough areas in psychiatric work. Specifically, I feel it is more representative of the state hospital groups than of psychiatry in general. The university groups have not always had repre-

sentation or an adequate place in the organization. In the last year and a half rapid strides have occurred in the area of psychiatric rehabilitation which is as yet unrepresented in the American Psychiatric Association in spite of the fact that some efforts have been made to bring this to the attention of the Association. I doubt that the APA as it now stands, is truly representative of the broad range of psychiatric work and workers. There is no central point at which the average member can make his own thinking and working felt. This criticism also extends to the field of psychoanalysis which clearly needs better integration with the general trends of American psychiatry.

"Somehow the Society should work out a program for really coordinating the opinions of the total membership. Even a stockholding company permits a written ballot for the election of officers. Some such plan would give a real opportunity for every member to express his preferences. In addition, I feel that the younger members of the Society are far too little heard from and the Society has been too long controlled and somewhat entrenched by a group of older, possibly more thoughtful—sometimes less active—individuals.

"I am strongly in favor of the American Psychiatric Association assuming its rightful leadership. This seems obligatorily to include an expanded program at whatever cost to the members.

"Fortnightly bulletins could be a very real help in keeping all the members informed of plans, progress and developments. It should not be an organ which would duplicate the AMERICAN JOURNAL OF PSYCHIATRY but serve a specific function in assembling, correlating and distributing pertinent facts about the organization, its developments and outstanding projects in psychiatric work.

"In short, I very much welcome a proposed revision in the function of the APA. It is a healthy trend. For some time I have thought the effective way for the younger members to have an adequate voice would be in the establishment of a junior society comparable to the Young Turks in Internal Medicine.

"I realize that such an expanded program would obligatorily call for full-time participation of one or more individuals of outstanding service and leadership. Such an individual should work in close association with a rather large advisory committee of experienced psychiatrists in order to avoid centralization of influence.

"To effect these changes I would be in favor of any increase in annual dues necessary."

* * * *

"I appreciate the opportunity to express myself relative to the Association. I wish I were better qualified to contribute something of real value. I am afraid that my suggestions are largely opinions and prejudices, but I believe they are held by more members than myself alone.

"I want to be an active participant in the activities of an active society. I want it to be strong, well-organized, scientific, agressive. I want the President to be a man to whom I can look up, because of his scientific achievements. I want to be represented by a Director, or a group of Directors, who will lobby for me, who will be articulate for me when I cannot be, who will visit me occasionally and help me when I need help. I want the work of the Association performed by committeemen who are interested in what they are doing, experienced and energetic. I want enough committees to cover all the work that is necessary. Liaison with medicine. I want this to be something real, not something we talk about as being necessary, but never get around to it.

"I want to pay enough in dues to feel I am investing in something alive and active. I want a return on my investment. I want membership so selective that membership in itself is of value. I want to believe that the Association will protect me as much as a trade union will protect one of its members; after all, I am in the institutional field and constantly aware of what this means.

"I want to attend meetings where I can see and hear the best; where the young man can display his talents, if any, but properly seasoned by mature judges; where the sound and the solid are presented instead of the fanciful and the spectacular.

"I am particularly interested in teaching. I want more papers on this subject, a more active committee, leadership and organization. I think there is too much confusion in psychiatry because there are too many small related societies—research, therapy and many other subdivisions being represented. I would like to see this chaos cleared by the Association taking an active interest in and directing such work. The number of small psychological societies and journals suggest lack of organization in this field—but should the same be true in ours?

"I think the Association should take the lead in all important psychiatric matters or else state its point of view. In certain fields, as rehabilitation of veterans and of alcoholics, there are numerous small groups futilely trying to work out big problems. The Association could be of tremendous value by drawing loose ends together and helping to organize and integrate the many small bodies into a few larger effective groups.

"I don't want the Association to grow in size at the expense of strength. I am not particularly keen about the meetings as they now are, at least certain aspects of them. I am not interested in the facts that so many hundreds of visitors are present, that the ladies will go on a hayride or a sleigh ride—the local Chamber of Commerce might be interested but I'm not.

"I don't like all this commercial advertising. I know where to buy Camels, Coca Colas, books, window screens, x-ray machines, electroshock apparatus and the like—if I want them.

"I don't like so many sections running concurrently. Some are a waste of time. In others, I am constantly being stepped on by spectators rushing off somewhere, I can't hear because of the visiting going on in a corner of the room, I often cannot understand the speaker's dialect. I'm tired of running all over a hotel looking for a non-existent room or waiting for permanently disabled elevators. I know where to find street fairs and railroad terminals and crowded department stores—if I want them.

"I don't want local or regional meetings substituted for a national meeting. Most regional meetings I have attended are social gatherings with second-rate, quasi-scientific programs. I

don't want a news bulletin or a bi-weekly letter of some sort. Such a thing can hardly be big enough to be of value—this isn't Rotary, and what's the JOURNAL for?

"Again I wish to express my thanks for this opportunity. I believe the Association could be of much greater help to the individual but that it could hardly be accomplished without some radical changes in make-up and policies. I would recommend an organization smaller in size, more scientific, closer to medicine, restricted in membership, with a more active and aggressive policy than has been the case in the past. I trust that you will treat as confidential the remarks that I have made. Obviously, some of them are quite out-of-line with general thinking."

* * * *

"I received your committee's report shortly after returning from overseas and am perhaps just over the deadline in answering it. However, I wanted time to reflect on your questions, to discuss the situation with other men and to compare experiences. Without such material help I shall make this as informal as possible.

"Dr. Bowman's letter concerning the discussion on the deficiencies of leadership of the APA at the December meeting indicated that the dissatisfaction that many of us feel is not limited. Many, including myself, have considered resigning in protest to the passive attitude of the APA towards problems connected with psychiatric activities in the sciences. (My experience has been entirely with the A.A.F. and it is to that branch I refer.)

"Prior to your letter the only previous evidence of interest was a demand that my dues be paid promptly. In the flurry that this created I received a statement from our Mr. Davies that some committee had made a survey and had come to the odd conclusion that we hadn't even made a financial sacrifice in entering the Armed Services. This is the best example I can give both of the lack of interest and the lack of consideration demonstrated by the APA to its fellows who have entered the services.

"I have found it very difficult to convey the sense of abandonment that so many of us feel. This is undoubtedly tied up with our total situation and the repeated frustrations and humiliations to which we have been subjected through a lack of interest, consideration and understanding of our problems. The attitude of the APA has given us a reality factor that will lead to many repercussions. We feel that when the APA took it upon itself to help recruit us it assumed the added responsibility to see that our efforts were being utilized properly and standards maintained. What ever interest the APA may have had certainly never reached to our level.

"To answer your specific questions: (a) I am most dissatisfied with the *laissez-faire* attitude of the APA towards the psychiatric situation in the armed services. This was an opportunity for leadership that could have improved the status of psychiatry and prepared us for the problems of the postwar world. I am aware that there are 'committees' supposedly interested in military psychiatry, but from the point of view of the group I have discussed the situation with, they have apparently been non-effective.

"(b) As a basis for a more effective action it would appear that a change in the internal organization of our association is indicated to insure progressive and representative leadership. The present system of nominations makes for a hierarchy which appears to seek only to perpetuate itself.

"(c) I will gladly back any expansion that includes some democratization of our association and makes it more representative of American psychiatry. However, I feel that we should do something constructive about the present organization before we compound the already existing deficiencies.

"(d) Since entering the Service I have become increasingly aware that my situation as a psychiatrist has a direct relationship to the status of psychiatry.

"(e) Any decentralization of the present organization would probably have a beneficial effect on its democratization.

"(f) Yes.

"The above opinions should be considered as representing my personal point of view. I might say that we have the nucleus of a group that will be prepared to ask many 'whys' when we are free to do so.

"I certainly appreciate the interest of your committee, even if it goes no further than that."

* * * *

CONCLUSIONS

Your committee recognized that it was faced with a complicated problem. On the one hand, it had the request of the President of the Association that a definite program be proposed. It also received from a small but very articulate minority of the membership, strong objections to the carrying out of its assignment. Finally, it was handicapped by the silence of 92% of the membership. (Members of the committee have been informed by quite a number of the members of the Association that they did not receive the questionnaire sent out routinely by the central office of the APA. The committee has no explanation for this.)

On the basis of the number of replies received, or rather not received, one might infer that a large number of the members would seem to lack sufficient interest in the affairs of our Association.

Therefore, your committee recommends that questions about reorganization be deferred pending a further expression of opinion on the part of the membership. It must be recognized that suggestions of change and reorganization, when first presented, stimulate disunity rather than unity. It must also be recognized that at present there are wide gaps in understanding between groups within the Association, representing various interests and kinds of psychiatric activity.

With that in mind, your committee believes that the number one task before the Association, deserving our best attention, is not whether to reorganize in this way or that, or to remain as we are. Neither is it to meet together and report our latest thoughts and researches in a scientific meeting, as we customarily do in our annual meeting.

Instead, we recommend that the next convention of the Association be devoted to a serious, down-

to-earth discussion of the practical problems our members meet in their daily work; that the convention be divided into discussion groups small enough to be workable; and that there be no, or at least only a few, formal speeches and papers. In setting up discussion groups the Program Committee should provide a way for members to exchange ideas about those problems with which they are most concerned. There should be predetermined topics in which they have expressed an interest. The function of the discussion group leader would be not to pontificate or expertize, but rather to encourage members of the group to put questions and express ideas of their own. Inasmuch as a majority of the membership is on the staffs of governmental hospitals, the emphasis of the convention must be on their problems.

It is the hope of your committee that out of such a meeting steps in the direction of an effective work program for the Association may be taken and that increased unity of the membership may be promoted. We recommend that the question of reorganization be referred to the incoming administration.

The idea of dispensing with a formal program of papers, and dividing the participants of the convention into working groups is not new. Educational organizations and some other professional groups have used it with gratifying results.

There are various techniques for setting up such a program. This is a matter for the Program Committee to consider. However, in order to explain more fully our recommendation we will give a brief elaboration of this idea.

One simple plan is as follows: In order to find out how many groups should be set up and around what constellations of topics, a canvass of the membership would need to be made in advance by mail, offering selections of topics and soliciting additional ones. Registration for the convention is obtained in advance by mail and assignments to discussion groups would be made in advance also, on the basis of preferences indicated. Leaders for the groups would be assigned to particular topics and each leader would have a separate room for the meeting of his group. He would remain in the same room but would hold more than one session. The participants in the first session would split up at the end of that period and, according to previous assignment, move to other groups so that each one may have an opportunity then to take part in discussions with an entirely different group of men.

The evening of the first day may be used by the discussion group leaders to report and discuss their experiences. They can also arrange for interchange of significant data between groups during the next day's session. Finally, they should decide what method is to be used for summation of the discussions and which decisions require action.

The convention may be concluded by a half day or full day during which various groups could make reports to the entire assembly, and the necessary business of the Association would be transacted.

Groups considering like topics should probably be arranged under various sections. Sections might be organized according to various fields of interest; the following are merely suggestive:

Section	*Topics*
Medical education	Medical school curricula. How should psychiatry be taught? How should psychiatry be integrated into other courses? Training standards in hospitals approved for residencies. Graduate Schools and Training Centers.
Relation of psychiatry to various agencies.	Welfare organizations, public and private. Cooperation with municipal, state and federal health agencies, especially Veterans Administration. *National Health Bill*
State medical licensing boards.	Examination questions. Coordination with APA
Public education	What functions should we perform in this field? What should be our relationship to the National Committee for Mental Hygiene?
Public hospitals	Budgets Salaries Training programs Building plans Relations with governmental administrative bodies Out-patient departments Boarding homes Social service Commitment laws Where and how shall we provide for the aged ill? In our hospitals? In adequate institutions? In boarding homes?

We believe the problems of the institutional psychiatrists should have a major place on the program. Seventy to eighty percent of the APA membership serves on the staffs of governmental hospitals. These men serve at low salaries, and in some instances, under conditions of political control that cripple their effectiveness. Individually and as a group they carry responsibilities far beyond those of most other psychiatrists.

Their discharged patients are not an alumni body which can lobby in the legislatures for their interests, as the alumni of the state universities can. The legislators are under pressure from the taxpayers to pare budgets. The state hospital staffs know better than anyone else how much of their energy and attention must be given to problems of economical administration, at the sacrifice of service to patients.

The road boosters and universities have their lobbies. Who will speak for the state hospitals? This is especially pertinent now when the surplus

funds of the states amount to a total of seven billion dollars.

The importance of this problem must not be overlooked. The welfare of a half million psychiatric patients depends on it. Other problems are of very great importance and deserve thoughtful discussion. Medical education, recruitment of superior students into our field, expansion of research, Veterans Administration, standards for hospitals and clinics, and the National Health Bill, are only a few of these.

* * * *

In asking the Council and Program Committee to consider this suggestion for our annual convention, we have in mind the following as the usual purposes of a convention:

To see friends working in the same field and refresh the friendship.

To exchange ideas with those same friends.

To make new acquaintances and friends.

To get stimulation and new knowledge from colleagues who make formal presentations.

Dispensing with the customary formal program and setting up numerous small groups will provide an orderly and efficient means for the exchange of ideas and for constructive thinking on those problems which are most urgent in the APA.

At the present time, when our membership faces such heavy obligations, individually and as a professional group, it is our earnest opinion that we should avoid controversial issues that may stimulate further disunity. Instead, we believe the most useful task to which we can address ourselves is an across-the-table discussion on a practical basis of the problems that hinder us in the practice of our profession.

SPECIAL COMMITTEE ON REORGANIZATION
KARL MENNINGER, M. D., *Chairman,*
LEO H. BARTEMEIER, M. D.,
A. E. BENNETT, M. D.,
SPAFFORD ACKERLY, M. D.,
THOMAS A. RATLIFF, M. D.,

CORRESPONDENCE

PINEL BICENTENARY

On the occasion of the bicentenary of the birth of Philippe Pinel the Secretary sent on Bastille Day the following letter of greeting from the Association to Professor René Moreau, Pinel's successor at the Bicêtre, and to Professor Georges Guillain, of the Salpêtrière:

July 14, 1945.

DEAR DOCTOR:

In this year which marks the two hundredth anniversary of the birth of Philippe Pinel, and on this day which means so much to France and to the world, The American Psychiatric Association sends warmest fraternal greetings to you and to your Staff. As the fall of the Bastille symbolized the liberation of the human spirit, so did the ministrations of Pinel inaugurate a new era in the medical approach to mental disease and in the humane care of the mentally ill.

The memory of Pinel is cherished in the United States, as in all other civilized nations. Our Association wishes for you and your Staff many years of continued success in the spirit of Philippe Pinel.

Sincerely and fraternally yours,

(Signed) WINFRED OVERHOLSER, M. D.,
Secretary-Treasurer.

Translations of their replies follow:

PARIS, September 19, 1945.
bis
215 Boulevard St. Germain.

DEAR DOCTOR OVERHOLSER:

I have just received, after a long absence, your very kind letter of the 14th of July 1945 and I beg you to excuse, therefore, my involuntary delay in replying to it.

I was deeply touched by the cordial sentiments you express to me as well as to my assistants at the Salpêtrière, in the name of The American Psychiatric Association in commemoration of the two hundredth anniversary of the birth of Philippe Pinel. Please convey for me to your colleagues assurances of our very ardent and very sincere gratitude. We know, in France, all that we owe to the American Nation for the liberation of our country; we know also how much American psychiatry has contributed to the knowledge of mental illnesses and to their treatment, and we admire your work. I hope that, in the future, international collaboration with your eminent savants will go forward to the greater enrichment of the neurological and psychiatric sciences.

Accept, dear Doctor Overholser, my kindest regards.

(Signed) GEORGES GUILLAIN.

PROFESSOR GEORGES GUILLAIN.

DOCTEUR RENÉ MOREAU

PROFESSEUR AGRÉGÉ À LA FACULTÉ DE MÉDECINE
MÉDECIN DES HÔPITAUX

99, Rue de Courcelles

PARIS, 15 December 1945

DEAR SIR AND HONORED COLLEAGUE:

I received with emotion your letter of the 30th of November which brings to us the expression of gratitude and admiration of The American Psychiatric Association, on the occasion of the two hundredth anniversary of the birth of Pinel. He brought about, as you very well describe, a veritable revolution in the treatment of mental illnesses: by him all human compassion was employed in attenuating the misery and the distress of the mentally ill. He was the first to vitalize the French psychiatric school and for more than a century his benevolent influence made itself felt, transmitted by Esquirol, Magnan, Chaslin, Lèglar, Dupré. The psychiatric services of the Bicêtre and the Salpêtrière were benefited by their work and their instruction.

Today those services are closed and psychiatric instruction is wholly concentrated at l'Asile Clinique de Sainte Anne where the great traditions of French psychiatry are transmitted from generation to generation.

One of the last incumbents of the chair of psychiatry of the Faculty of Medicine, Professor Henri Claude, died recently. By a touching stroke of fate, we learned at almost the same time of the death of his successor, Professor Lévy-Valensi. Deported to Germany in 1943, he died there after humiliation and torture: the successor of Pinel, a Frenchman of striking dignity, a veteran of 1914-1918, died the victim of a persecution and a madness that threatened to destroy the world: American aid intervened in time to spare the world the accomplishment of that frightful destiny.

Your expression of affection and of solicitude is thus doubly precious to us: it evokes a memory and brings in its wake hope for the men of this country who during four years have known sorrow of heart and constraint of soul and are eager to take up again in freedom the medical work that has been interrupted.

Accept, dear sir and honored colleague, with all my thanks the expression of my feelings of profound sympathy.

(Signed) RENÉ MOREAU.

DR. C. G. JUNG AND NATIONAL SOCIALISM

In the last number of the JOURNAL appeared a letter from Dr. Gotthard Booth pointing out misconstructions and mistranslations of utterances of Dr. Jung, in a communication from Dr. S. S. Feldman printed in the September 1945 issue of the JOURNAL.

Since publication of Dr. Booth's letter two others have been received, one from Dr. Gerhard Adler of London, and one from Dr. Ernest Harms, editor of *The Nervous Child* and of the *Journal of Child Psychiatry*, both calling attention to inaccuracies in Dr. Feldman's statements.

Dr. Adler, "one of the oldest personal pupils of Professor Jung and a member of the executive committee of the Society of Analytical Psychologists in Great Britain," himself a Jewish refugee from Germany, expresses indebtedness to Jung for help extended to him and other Jews. He says:

> It certainly seems rather absurd to accuse Jung of antisemitism or sympathy with National Socialism when so many of his pupils have been Jews; and none of them has ever found the slightest reason to accuse Jung of antisemitism or of being a Nazi.

Dr. Adler points out the egregious mistranslation—"admiration" instead of the correct rendering, "amazement," already referred to in Dr. Booth's letter.

On Dr. Feldman's version of a passage in the Jung article: "The Jew . . . . has never had, and never will have, his own culture." Dr. Adler comments:

> Whereas Jung says 'and, as far as we can see, never will have his own cultural form ('Kulturform').' Dr. Feldman seems unable to grasp the difference between 'culture' and 'cultural form' ('Kultur' and 'Kulturform') and so he prefers to mistranslate it (although Jung mentions on the previous page of his article the fact of the 'twice as old culture' of the Jew). It must be evident to everybody that the Jew in fact has not created his own cultural form (if one does not want to regard the 'Ghetto' as such), just as little as the Swiss, although they possess culture, have created a cultural form.

Further on in his letter Dr. Adler says:

> I am afraid that the space which Dr. Feldman's misquotations forced me to occupy makes it impossible to go into the more fundamental questions of Jewish psychology and Jung's interpretation of it. Naturally one can hold different opinions from Jung's with regard to this problem—but they have to be discussed on the *psychological* and not on the *political* level. Dr. Feldman's article is nothing but a repetition of the Freudian attempt to discredit Jung's psychological views by discrediting his political views. . . . .

Regarding Jung's attitude toward Nazism, Adler quotes from Jung's Terry lectures on "Psychology and Religion" at Yale University, published in 1938.

> Now we behold the amazing spectacle of states taking over the age-old claim of theocracy, that is, of totality, inevitably accompanied by suppression of free opinion. . . . . It is not very difficult to see that the powers of the underworld—not to say of hell—which were formerly more or less successfully chained and made serviceable in a gigantic mental edifice, are now creating, or trying to create, a state slavery and a state prison devoid of any mental or spiritual charm.

Dr. Adler continues:

> The consistency of all these statements with the interview in the *Weltwoche* [to be published shortly in English] which Dr. Feldman quotes is evident. Thus Dr. Feldman's article creates by mistranslation and misrepresentation of facts a thoroughly wrong and unfair picture of one of the greatest figures of modern psychology.

Dr. Ernest Harms, a pupil of Jung since 1919 and who has maintained contact with him since, supplies some facts concerning the reorganization of the *Zentralblatt für Psychotherapie* to which Dr. Feldman had referred:

> This Journal was never solely or predominantly edited by Dr. Kretschmer. On its cover there always appeared the names of Robert Sommer and Ernst Kretschmer as formal editors; the real editor since about 1930, however, was Dr. Arthur Kronfeld of Berlin. The Journal was the organ of the international group of psychotherapists known as the Allgemeine Aerztliche Gesellschaft für Psychotherapie. . . . . When Nazism came to power, Kronfeld, being Jewish, had to resign. Kretschmer tried to continue the Journal, but only for a short while. The Allgemeine Gesellschaft had to be dissolved. There had to be found a non-German with some authority to help, if the Journal was to be kept alive. At this point Dr. Jung was asked, who before had had no connection with the *Zentralblatt*, and who—really not with great enthusiasm—agreed to take over, if a new international organization could be created. The Ueberstaatliche Allgemeine Aerztliche Gesellschaft was founded as an association of the individual groups. This was the only way which was permissible under the new Nazi rule. Jung consented to be the first president. He did all this in order to preserve international cooperation and

to assist those amongst his colleagues who were tied down in Germany. However, as the entire development progressed, even Jung's good will slackened. We see him retire more and more from the *Zentralblatt,* which after the first year (1935) was forced to add the name of the German leader in psychiatry, Dr. Goering, to that of Jung. In the volumes after 1935 we find no more contributions or communications of any kind by Dr. Jung. . . . .

S. S. Feldman wants to represent Jung as a Jew-baiter. . . . . It would take a long article to explain the real facts of the relationship between Sigmund Freud and C. G. Jung, which have, of course, not been the happiest. We have been flooded in an almost oppressive way with information on the part of Freudians using the unkind utterances of Freud regarding Jung. S. S. Feldman tries to make use of this to demonstrate how badly Jung behaved towards Freud who had selected him as his successor.

Dr. Harms then refers to the address of Jung at the founders' meeting of the new International Psychotherapeutic Society in May, 1934, in which he paid tribute to the work of Freud at the cost of being furiously berated by the Nazi press. Dr. Harms comments: "I have hardly ever witnessed a more noble and courageous gesture on the part of one scientist towards another."

He draws attention to the fact that besides Pierre Janet, Jung was the only psychiatrist who received an honorary degree on the occasion of the Harvard Tercentenary celebration in 1936.

COMMENT

NEUROSES AND PSYCHOSES

In the words of the old riddle, one might ask: "When is a psychosis not a psychosis?" And the answers would be as variable as the definitions of the word psychosis. The trouble is that most psychiatrists do not even bother to define the word before using it, taking it for granted that everybody knows what it means; but the word is so ambiguous that it really means very little. At first the term was used to get away from the term "insanity," which had a legal implication. There was much to be said for the nomenclature which put all mental disorders under the heading "psychosis" and divided them into "major" and "minor." But this had only a brief popularity. Recently the custom has been to call the major disorders "psychoses" and the minor ones "neuroses." If a list of the principal diagnostic entities dealt with by psychiatrists were to be made, starting with the generally less severe disorders and proceeding to the more incapacitating, the first ten headings could be:

1. Nervousness and psychosomatic reactions thereto.
2. Anxiety state.
3. Reactive depression.
4. Hysteria.
5. Obessive-compulsive reaction.
6. Anorexia nervosa.
7. Hypochondriasis.
8. Alcoholism and other addictions.
9. Perversion.
10. Psychopathic personality.

From here the list would go on to schizophrenia, manic-depressive, senile psychoses, etc. Most psychiatrists would agree that the first five headings were "neuroses," about the next five there would be some disagreement. From there on down the list, there would be fairly general agreement that one was naming "psychoses."

There is, therefore, some basis for the use of the words "neuroses" and "psychoses" and this basis is common usage. But for scientific speech one needs more than that. Is there any acceptable generalization that differentiates the two terms? That is to say, any generalization based on scientific fact?

Obviously the division of the two by calling the neuroses "functional" is out of date. Any modern pathologist knows that there are many structural changes that cannot be seen with the microscope and all physiologists know that there can be no functional performance without structural change in the tissues involved. To make a division of nervous disorders into two great classes, "organic" and "functional" on the basis of whether or not a lesion is visible to the pathologist, is too naive to stand in scientific thinking.

Another general basis for separating neuroses from psychoses is that of psychogenesis. It is said that the neuroses are caused by psychological maladjustments, *i. e.*, troubles in interpersonal relations, sexual, social, economic, etc. On the other hand the psychoses are said to be "not purely psychogenic." For this latter statement there is plenty of evidence, for example, the hereditary factors in some psychoses and the cerebral lesions accompanying others. But there is no good evidence for the statement that neuroses are "purely psychological." Most psychiatrists agree that neuroses have important psychological factors and that psychotherapy usually is the best treatment, but that does not prove that the disorders are purely psychogenic. Good psychotherapy helps almost any sick person, whether he has cystitis, pneumonia or paralysis agitans! Moreover, the man who did most to elucidate the psychological mechanisms of the neuroses, Sigmund Freud, believed that in neurosis there were hereditary and chemical factors, as well as the psychological.

It has been held that neuroses are "part reactions" as opposed to psychoses that are "whole reactions." This, however, seems to offer no really clear-cut distinction. Granted, that a depression is an overwhelming reaction that seems to affect the total personality, yet people in mild depressions (of undoubted manic-depressive reaction type) can carry on their affairs for months. On the other hand

some patients are economically incapacitated by phobias or hysterical reactions. In short the "part" or "whole" distinction, though true broadly speaking, is a differentiation based on degree of incapacity, on the experience that most psychoses lead to hospitalization and most neuroses do not. But the organism is a unit and a disease of any part affects the total function.

What the argument seems to boil down to finally is the following: The province of psychiatry lies in a group of disorders with predominantly psychological symptomatology. Those that are mild and can be treated in the home and office are usually called "neuroses" and those that are severe and lead to commitment are usually called "psychoses." This is not a medical, it is an administrative distinction. It has no scientific value and it leads to many misconceptions. For example, one frequently hears of a "neurotic" patient, with anxiety and hypochondriasis, "becoming schizophrenic" and being sent to a mental hospital. Likewise one often sees patients who have "neurotic fatigability and asthenia" becoming depressed and suicidal. In all probability one sort of psychiatric reaction does not change into another. It is much more likely that incipient schizophrenia and the mild depression were wrongly diagnosed. Who has not made such mistakes in diagnosis? The fact is that at present there is no accurate means of early differentiation in mild cases.

One is brought back to the realization that psychiatry is still largely a descriptive and clinical science. Little about etiology is known. When it is known one can make a logical classification that will be of real help in therapy. In the meantime our diagnosis must be descriptive and tentative. Especially to be avoided are unjustifiable generalizations that lead to such unscientific dichotomies as "neurosis vs. psychosis," "functional vs. organic," or "psychic vs. somatic."

There is no doubt that most of us will go on using the terms neurosis and psychosis. They are convenient to designate large groups of patients—those that a psychiatrist sees in the office as opposed to those committed to a mental hospital. There is no harm in using the terms administratively unless we fool ourselves into believing that they have etiological meaning.

When a patient has to be committed one may say "he became psychotic" on such and such a day. Nothing is more certain than that the patient had been sick a long time before he "became psychotic" and that all that long time he was suffering from the same disease. What is meant by "he became psychotic" is that society became alarmed at his behavior and insisted on his being hospitalized. Once more it is obvious that the distinction is legal, not medical or scientific.

S. C.

TRAINING IN PSYCHIATRY

A Word from the President

Dr. R. A. Chittick, Superintendent of the Vermont State Hospital, has called my attention to the fact that in my last President's Letter discussing training in psychiatry, I made no mention of the state hospitals, although I had suggested that men who could not obtain suitable residencies might secure training in neurology while awaiting an approved residency in psychiatry. I am pleased that he called my attention to this omission and would like to emphasize that there are many positions available in state hospitals throughout the country where doctors can secure further experience in psychiatry even if they are not approved as training centers.

It should also be pointed out that two years work in psychiatry in such a state hospital can be counted toward two of the five years of required training even if the state hospital is not approved for training. It would seem then that many doctors who wish to go on into psychiatry might secure temporary appointments in state hospitals while waiting for an appointment in a hospital that is approved for resident training.

Karl M. Bowman.

MEDICAL SERVICES FOR VETERANS

The official endorsement by The American Psychiatric Association of the policies being followed by the Veterans' Administration under the leadership of General Omar Bradley, merits the attention and active support of every psychiatrist. To insure the best possible medical care for veterans, the profession must stand as a buffer between the Veterans' Administration, and political influences which may endanger the execution of their policies.

In the question of whether the Veterans' Administration is to be governed by the needs of veterans, or by political groups, the impracticality of the latter has been amply illustrated in former years. The many small veterans' hospitals, located in inaccessible places to which suitable medical and nursing personnel cannot be attached, and which are largely removed from the possibility of consultation with the most progressive medical centers, are mute evidence today of the folly of basing the provision of medical services on references from chambers of commerce and political pressure groups.

The new policy being followed by General Bradley and his Surgeon-General, Major General Paul R. Hawley, of giving first consideration to the veterans' medical needs is, of course, as it should be. As medical men interested in fostering the finest medical service, we should herald with great enthusiasm the setting up of deans' committees in centers to provide consultative service to the veterans' hospitals; the new salary scales which are designed to attract the best full-time physicians, as well as consultants; the development and improvement of out-patient service; and praises be, we should most certainly applaud the change that attaches the name "hospital" instead of "facility" to veterans' institutions. It is our shining hope now that the step following the change in name will be the appointment of medical superintendents instead of lay "managers," a change which is strongly advocated by Major General Hawley.

General Bradley and General Hawley have been most cooperative with The American Psychiatric Association in effecting plans to care for psychiatric patients, and have consulted with the outstanding psychiatrists in the country in appointing Captain Daniel Blain as head of neuropsychiatric work in the Veterans' Administration. All of the Association's specific recommendations to improve the care of psychiatric patients have been satisfactorily backed by General Bradley and General Hawley.

It seems obvious that the Veterans' Administration is headed toward a practical, high-type of medical service program, and anything we can do to give them cooperation or support in these days of their reorganization will do much to keep political interference out of medical matters. This is not the job of the officers of the Association. It is the job of the entire membership.

Let us not sit idly by, allowing those men who are fighting the battles for the best in medical care for the veterans to be attacked for political or personal reasons, without raising our voices in vigorous protest. Every member who professes to stand for the best in care should find ways and means of doing his bit to back these men, just as long as they continue their present policy of putting the best medical care of the veteran above all else.

C. C. BURLINGAME.

SYMPOSIUM ON RELATIONS OF LAW AND MEDICINE

In 1943 this JOURNAL participated in a national symposium dealing with "Scientific Proof and Relations of Law and Medicine," the purpose of which was to promote closer association and better understanding between the two professions. The symposium consisted of a series of studies of subjects having both medical and legal aspects, and which were published simultaneously in both law reviews and medical journals. The general editor of the symposium was Hubert Winston Smith, research associate on the faculties of law and medicine at Harvard University.

This year Dr. Smith, who is now professor of legal medicine and affiliated with the College of Law and with the College of

Medicine at the University of Illinois, has arranged a second symposium of fifty or more studies prepared by legal and medical authorities on problems of joint interest to the two professions. These papers will be published by the participating medical and legal journals during the spring and summer of 1946.

A contribution in this series, "The Physician and the Federal Narcotic Law," by H. J. Anslinger, Commissioner of Narcotics, Treasury Department, Washington, D. C., appears in this issue of the JOURNAL. In the next number will be published a further contribution to the symposium by Weihofen and Overholser on "Commitment of the Mentally Ill."

Readers wishing to procure a master index containing citations to the studies published in both the first and second series of "Scientific Proof and Relations of Law and Medicine" may do so by sending twenty cents in stamps to Professor Smith, College of Law, University of Illinois, Urbana, Ill. Copies so reserved will be mailed between May 15 and June 1.

NEWS AND NOTES

PENNSYLVANIA PSYCHIATRIC SOCIETY.—At the seventh annual meeting which was held October 4, 1945, the following officers were elected for the year 1945-1946.

OFFICERS

Kenneth E. Appel, M.D., President. Philadelphia
Charles H. Henninger, M.D., President-Elect ..... Pittsburgh
Philip Q. Roche, M.D., Secretary-Treasurer ..... Philadelphia

COUNCILLORS

FOR ONE YEAR

Frederick H. Allen, M.D..... Philadelphia
Roy W. Goshorn, M.D..... Hollidaysburg
Harry M. Little, M.D..... Pittsburgh
George W. Smeltz, M.D..... Pittsburgh

FOR TWO YEARS

LeRoy M. A. Maeder, M.D..... Philadelphia
Thomas A. Rutherford, M.D..... Waymart
Cornelius C. Wholey, M.D..... Pittsburgh

AUDITORS

FOR ONE YEAR

Robert S. Bookhammer, M.D..... Philadelphia

FOR TWO YEARS

Harry F. Hoffman, M.D..... Allentown

FOR THREE YEARS

Robert J. Phifer, M.D..... Woodville

SCIENCE FOR DEMOCRACY.—"If we are to have a national science program, we need a balanced all-science program, with the primacy lodged where it belongs, in the social sciences. If science is to make real sense in relation to human life, the natural and the social sciences must reinforce each other in a genuine partnership, for the natural sciences can function fully only as society is effectively organized. And both would be the gainers, in this partnership, for the natural sciences need to be humanized, the social sciences to improve their technical rigor. . . .

"In any national science program worthy of the name, the social sciences must be planted at the core of scientific effort, and especially at the core of government, which is their laboratory and testing ground. They must be planted there at the start, not at some hypothetical future time."—*Ward Shepard,* Soil Convervationist, U. S. Department of Interior, Washington, D. C., in *Science,* January 18, 1946.

DR. JOSEPH E. BARRETT APPOINTED COMMISSIONER.—Dr. Joseph E. Barrett, since 1943 superintendent of the Eastern State Hospital at Williamsburg, Va., was appointed on January 22, 1946, Commissioner of Mental Health and Hospitals for the Commonwealth of Virginia succeeding the late Dr. Hugh C. Henry. A native of Arkansas, Dr. Barrett served in the state hospital of his home state from 1923 to 1928, then entering the Massachusetts state service. He progressed rapidly, becoming Assistant Commissioner of Mental Diseases in 1934, and in 1937 was appointed Director of the Michigan State Hospital Commission. When in 1939 the political climate of Michigan became unsalubrious, Dr. Barrett became associated with the Virginia state service. There his abilities as a progressive and resourceful administrator have been recognized, this recognition now culminating in his present appointment.

The JOURNAL extends congratulations to Dr. Barrett and to the Commonwealth of Virginia.

AMERICAN SOCIETY FOR RESEARCH IN PSYCHOSOMATIC PROBLEMS.—The annual meeting of the Society will be held at the Hotel Pennsylvania, New York City, May 11-12, 1946. The morning session, May 11, will be devoted to "Contributions of Military Medicine to Psychosomatic Medicine." The afternoon topic will be "Psychosomatic Aspects of Orthopedic Practice." At the annual dinner "New Advances in Psychosomatic Investigative Techniques" (An Illustrated Parody) will be presented by Bertram D. Lewin, M. D.

On May 12, submitted papers will be read. Roy G. Hoskins, M. D., is chairman of the program committee.

Because of space limitation, reservations should be made at least 2 weeks prior to meeting. Registration fee for non-members is $5.00 for two days; $3.00 for one. The charge for the Annual Dinner is $5.00. Limited hotel reservations are available.

SINAI HOSPITAL OF BALTIMORE.—Announcement has been made of the establishment of the Alfred Ullman Laboratory for Neuro-Psychiatric Research at the Sinai Hospital of Baltimore. The work in the laboratory will be carried out under the direction of Dr. H. S. Rubinstein.

CALIFORNIA STATE HOSPITAL HEADS APPOINTED.—Director of Institutions Dora Shaw Heffner has announced the appointment of new superintendents for Stockton and Norwalk State hospitals.

The new appointees are Dr. R. B. Toller at Stockton, succeeding Dr. Margaret H. Smyth, and Dr. M. J. Rowe at Norwalk, succeeding Dr. Edwin Wayte. The changes were effective as of March 1, 1946, on which date Dr. Smyth and Dr. Wayte were retired.

REFRESHER COURSE IN PSYCHIATRY AND NEUROLOGY, BELLEVUE HOSPITAL.—Beginning September 17, 1946, an 8 week full-time refresher course in psychiatry and neurology, will be given for physicians at the New York University College of Medicine, Bellevue Hospital Psychiatric Division, New York City. Instruction will be given by the staffs of the psychiatric and neurologic departments of the medical college—with the assistance of staff members from other divisions of the medical school. The subjects covered will include clinical psychiatry, clinical neurology, functional and organic psychoses, psychoneuroses, psychopathology, therapy, psychosomatic problems, neuroanatomy, neurophysiology, neuropathology, X-ray diagnosis, electroencephalography and other related subjects.

Registration is open to graduates of approved grade A medical schools who have completed an approved internship in medicine. Preference will be given to applicants who have had previous approved psychiatric training, and to those who are preparing for examination of the American Board of Psychiatry and Neurology.

Early application on an approved form for registration is recommended because of the limited enrollment which can be accommodated. Tuition fee, $250.00.

Additional information may be obtained from Dr. S. Bernard Wortis, Professor of Psychiatry, New York University College of Medicine, 477 First Avenue, New York City 16, N. Y.

ILLINOIS PLACEMENT SERVICE.—In order to help the various agencies make contact with psychiatrists coming from the services, as well as others, a Psychiatric Personnel Placement Service has been organized by the Illinois Society for Mental Hygiene in its offices at 343 So. Dearborn Street, Chicago.

A complete roster of opportunities for employment, education, and fellowships in Illinois will be set up for the convenience of the applicants. Gathering these data in one place makes it unnecessary for applicants to shop around to learn what opportunities are open.

The program was started in response to many inquiries made by individuals and agencies regarding opportunities and personnel. Inquiries may be addressed to Dr. Rudolph G. Novick at the Chicago office of the Society.

THE AMERICAN NEUROLOGICAL ASSOCIATION.—The 71st Annual Meeting of the American Neurological Association will be held June 26-28, 1946, in San Francisco, California, at the Fairmont Hotel. (Reservation cards will be sent to members later.)

The scientific sessions will be held on Wednesday afternoon, June 26, at 2.30, and on Thursday and Friday morning and afternoon at 9.00 and 2.30. There will be no symposium. The annual dinner will be held on Friday evening, June 28, at 7.00.

The American Association of Neuropathologists will probably meet at the same headquarters on the morning of June 26.

The President, Dr. Schaller, will arrange for the entertainment at the Bohemian Grove

over the week-end immediately following the meeting, of any members and their families who would like to have the opportunity for this unique camping experience. Trips to points of interest in the vicinity of San Francisco will also be available.

JOBS AND THE MAN.—A publication by the National Committee for Mental Hygiene is termed a guide for employers, supervisors, interviewers, counselors, foremen and shop stewards in understanding and dealing with workers, civilians or veterans. This pamphlet is based on extensive clinical experience and upon consultation with many employers, personnel directors and veterans' coordinators. It deals with the readjustment of veterans to civilian living, placing men in the right kind of jobs and treating them helpfully at their work, practical techniques in industrial interviewing and counseling, understanding service men who come back nervous, and steps towards better industrial mental health and human relations. The authors of this publication are Luther E. Woodward, Ph.D., and Thomas A. C. Rennie, M. D.

CLEVELAND WELFARE FEDERATION.—"Mental Health for Everyone" was the general topic of four sessions at the fourth annual health and welfare institute of the Welfare Federation of Cleveland. The topics included a definition of mental health in layman's language; what the war has taught us about mental health; mental health in the schools; and what our legislators say. Other principal subjects were employment; human aspects of the housing needs; and is the American family disintegrating? Seventy-five community organizations served as co-sponsors with the Welfare Federation.

ANNUAL MEETING, NATIONAL COMMITTEE FOR MENTAL HYGIENE.—The thirty-sixth annual meeting of the National Committee for Mental Hygiene was held at the Hotel Waldorf-Astoria, New York City, November 1 and 2, 1945, with more than 1000 persons in attendance.

At the opening session, with Dr. S. Bernard Wortis presiding, a symposium on "Prejudice" was presented. This was followed by the annual luncheon meeting at which Mr. Eugene Meyer, editor of the *Washington Post* and president of the National Committee for Mental Hygiene, presided. At this time the medical director of the National Committee, Dr. George S. Stevenson, presented his annual report. The guest speaker was General Omar N. Bradley, Administrator of Veterans Affairs, whose address was titled "Protecting the Health of the Veteran". (This address was published in the January 1946 number of *Mental Hygiene*.)

At the luncheon meeting General Bradley also presented the Lasker Award in Mental Hygiene, which this year was divided between two outstanding leaders in the field of rehabilitation—Dr. John Rawlings Rees, formerly Consultant in Psychiatry in the British Army, with the rank of brigadier; and Major General G. Brock Chisholm, Deputy Minister of National Health, Ottawa, Canada.

At the afternoon session several papers were offered dealing with new technical developments in psychiatry and mental hygiene, with Dr. Frank Fremont-Smith, Medical Director of the Josiah Macy, Jr. Foundation, acting as chairman.

Dr. Ellen C. Potter of the New Jersey Department of Institutions and Agencies presided at the morning session of the second day. Several papers were read dealing with "Federal Mental Hygiene Activities". Dr. Samuel W. Hamilton presided at the luncheon which followed at which Dr. Chisholm spoke on "World Peace and Mental Health". At the luncheon meeting *The Modern Hospital* prizes for the three best essays on the topic, "A Plan for Improving Hospital Treatment of Psychiatric Patients" were presented by Dr. Robert N. Felix. The first prize, $500, went to Lieutenant L. L. Hasenbush, Medical Corps, U.S.N.R.; the second prize, $350, to Gerald Victor Haigh of the Norwich State Hospital; the third prize, $150, to Captain K. R. Eissler of Fort Jackson, S. C.

The final session was devoted to contributions on the general subject of the *Modern Hospital* competition. The speakers were Dr. Daniel Blain, Dr. Nolan D. C. Lewis, Dr. Luther E. Woodward and Dr. Thomas A. C. Rennie.

NORTH CAROLINA APPOINTMENTS.—Dr. Louis Girardeau Beall, for the past several months acting superintendent of the state hospital at Morgantown, has been appointed superintendent of that institution by the State Hospital Board.

Dr. Robert Guy Blackwelder has been appointed superintendent of the state hospital at Raleigh, after having served for several months as acting superintendent.

WESTBROOK SANATORIUM.—Dr. J. K. Hall, medical superintendent of Westbrook Sanatorium, Richmond, Va., reports the addition to his staff of Dr. Thomas Edgar Painter, after four years service in the medical Corps of the United States Army.

NORWICH STATE HOSPITAL.—Dr. Riley H. Guthrie, previously first assistant physician at St. Elizabeths Hospital and recently appointed superintendent of the Norwich (Conn.) State Hospital, brings to that post a rich and varied professional experience. Formerly assistant to the commissioner in the Massachusetts Department of Mental Disease, he also served for several years as chief executive officer of the Boston Psychopathic Hospital. Earlier as assistant superintendent of the Monson (Mass.) State Hospital he had done extensive research work on epilepsy.

In strengthening his staff at the Norwich State Hospital, Dr. Guthrie announces the appointment of Dr. Emerick Friedman as clinical director. Dr. Friedman, a member of the staff since 1940, has lately returned to the hospital after three years service in the Medical Corps of the United States Army, attached to the Air Force. He was discharged from the Medical Corps with the rank of major.

MANUSCRIPTS INVITED FOR NORTON MEDICAL AWARD.—The book publishing firm of W. W. Norton & Company announce that they are again inviting manuscripts for submission to be considered for the Norton Medical Award of $3,500 offered to encourage the writing of books on medicine and the medical profession for the layman. The first such award was made to THE DOCTOR'S JOB, Dr. Carl Binger's book, published last spring, which gave the doctor's point of view on his work. Announcement will be made shortly of the winning book for 1946. Closing date for submission of manuscripts this year is November 1, 1946, the winning manuscript to be published in 1947. All particulars relating to requirements and terms may be had by addressing W. W. Norton & Company Inc., 70 Fifth Avenue, New York 11, N. Y.

AWARDS FOR RESEARCH ON PROFESSIONAL PROBLEMS OF WOMEN.—Pi Lambda Theta, National Association for Women in Education, announces two awards of $400 each, to be granted on or before August 15, 1946, for significant research studies in education. An unpublished study may be submitted on any aspect of the professional problems and contributions of women, *either in education or in some other field*. Among others, studies of women's status, professional training, responsibilities and contributions to education and to society, both in this country and abroad, will be acceptable.

Three copies of the final report of the completed research study shall be submitted to the Committee on Studies and Awards by July 1, 1946. Further information may be obtained from Miss Bess Goodykoontz, chairman of the Committee on Studies and Awards, U. S. Office of Education, Washington, 25, D. C.

Last year three awards of $300 each were granted to: Miss M. Gladys Scott for *Survey of Vocational and Professional Plans and Interests of High School Girls and College Women;* Josephine J. Williams for *Lay Attitudes Toward Women Physicians;* and Mary Lichliter for *Social Obligations and Restrictions Placed upon Women Teachers.*

AMERICAN GROUP THERAPY ASSOCIATION CONFERENCE.—The third annual conference of the American Group Therapy Association was held in January 1946 at the Commodore Hotel, New York City. The general topic of the conference was "Clinical Applications of Group Psychotherapy."

Papers were read dealing with treatment methods and results in various types of psychiatric disorders. There were also three round tables to complete the program.

S. R. Slavson, president of the Association, occupied the chair.

RORSCHACH COURSE, MICHAEL REESE HOSPITAL.—The division of neuropsychiatry, Michael Reese Hospital, announces its 1946 course in the Rorschach test to be conducted June 3-7, inclusive, by S. J. Beck, Ph. D. The teaching this year will focus especially on the more severe neurotic conditions. The Rorschach test records to be demonstrated will therefore be those derived from patients in acute conflict, including veterans of the war. For information write to the Secretary, Division of Neuropsychiatry, Michael Reese Hospital, 29th Street and Ellis Avenue, Chicago 16.

BOOK REVIEWS

MENTAL DISORDERS IN LATER LIFE. Edited by *Oscar J. Kaplan.* (California: Stanford University Press; London: Humphrey Milford: Oxford University Press, 1945.)

Statistics indicate and indeed our own ordinary observations leave no doubt of it, that the population is ageing. In Cicero's time life expectancy for the average Roman was 23 years. When Shakespeare lived it was approximately 37 and with us it is approximately 65. The factors contributing to this startling change need not be mentioned now. They are of course important but their results are more important. There are far reaching implications in practically every aspect of life.

What all this means for the practice of Medicine is of course of great interest to physicians. Not many years ago Pediatrics appeared as a Medicine specialty and its devotees have had considerable to do with the altered human picture. Almost suddenly physicians have come to realize that the average of the population is increasing, people are living longer and in this lengthened span new medical problems are appearing. Those who now live longer desire happiness, the opportunity to serve and freedom from suffering just as their forebears ten to twenty years younger did. It is plainly evident that the relaxation of medical effort that seemed to come when the patient passed the fifty or at most the sixty mark will no longer do.

Old age, its physiology, psychology, biochemistry and pathology are the objects of new interest and investigation. A slowly increasing current of articles dealing with these things has made its appearance in medical literature. Several texts devoted to the medical problems of the aged have been published. Through these media the members of the profession are being attracted to and interested in these particular problems.

Now there appears what the present reviewer believes to be the first text devoted entirely to the mental disorder of later life. It is of the nature of an expanded symposium. The Editor, Oscar Kaplan, himself a psychologist, has associated with him eleven physicians, four who are psychologists, physiologists or sociologists and one statistician. The result is a volume in which the subject is illuminated, one would say, from all relevant angles. Let no one assume that the book is simply a compilation of material already dealt with in books published previously. It is of course true, as everyone would anticipate, that some of the matter included could be found scattered here and there in other texts. Here whatever is repetition is gathered into one book and along with it is a great amount of new information. The present reviewer must admit that he was greatly surprised by such evidences of already reported investigation into the problems of later life as are here presented.

While the various contributors may each be supposed to have his special interest, the viewpoints expressed are not narrowly specialized. They are broad and inclusive. The sociological and economic aspects are mentioned and dealt with, forming no small part of the general program. There is, in fact, a whole chapter devoted to the Sociological Aspects of Mental Disorder in later life. One cannot help agreeing that we need such cultural reorganization of family and economic institutions as will provide both physical and emotional security in the old age period and an educational process such as will mold personalities in such a way as to fit them for successful adjustment in a world likely to be vastly different from that known to either our fathers or ourselves.

Dr. Bowman's introduction puts the whole problem well before the reader. His statements are on the whole general as indeed they should be. Dr. Pollock's statistical survey which appropriately follows provides the detailed evidence that in so far as mental institutions are concerned there is no doubt of the increasing incidence of mental disorders in later life. This does not mean that a larger proportion of the people who reach later life are developing psychoses requiring institutional care but that a larger number of people are living long enough to enter what is obviously a vulnerable period.

The surveys of physiological and psychological aspects of later life and the mental disorders that occur during it are particularly interesting. The amount of available data is surprisingly large but the fact that it has been published in so many different journals, etc., makes the present reviews especially valuable. In so far as physiology is concerned the important fact seems to be that while homeostatic capacities are well maintained even in old age, reserve capacities are so persistently utilized that "extremes of physiological displacement" are met more slowly than in the young. The fundamental difficulty may be supposed to be due to "interference with transference of essential substance to the cell or inadequacies in the enzyme system."

The psychological aspects of the problem receive satisfying treatment—no facet that is of importance or interest having been overlooked. Here again one notes the evidences of the many investigations that have already been made.

Disorders of nutrition are evident enough in later life. Not all result in mental abnormality but there are acute and subacute confusional states in old age that do not correspond clinically with those recognizably due to cerebral arteriosclerosis and senile dementia. Since many such cases are reversible Wexberg and later in the book Robinson postulate toxic or deficiency states as ultimately responsible. Such cases warrant considerably closer study than they have heretofore received.

A very important chapter deals with the neuroses of late maturity. Such conditions are in reality much more commonly met with than deteriorative psychoses and yet little mention is made of them in psychiatric texts and all too often there is a tendency to consider them as "signs of inevitable decay" and to adopt a fatalistic attitude toward them. The author of the chapter is at much pains to correct this tendency and the reader is rewarded with a really fine contribution.

The involutional states with and without psychoses, the presenile dementias and senile and arteriosclerotic states, especially the latter, are well presented.

An account of a survey of long hospitalized patients is unique and interesting, and conclusions reached that with no question of restoration in mind, much can be done to further the adjustment of such patients to their hospital existence. Individual appraisal and care yields improved results here as elsewhere in psychiatry. The editor himself deals with the aged subnormal. The elderly, facing an even increased need for emotional adjustment, develop as others do the somatic reverberations of conflict, anxiety and insecurity; but there are special opportunities for the development of emotional reactions in the physical disabilities and deficiency associated with and incident to the process of ageing. Such things as the general decline in speed and endurance, the climacteric, male or female, the disturbances in the circulatory system, especially as it affects the myocardium and cerebrum, the diminishing efficiency of the auditory apparatus, all contribute special items to and influences in the psychosomatic ailments of those in later life. Brief but well selected case histories greatly assist the author of this particular section in elucidating the subject.

The chapters on Psychotherapy and Mental Hygiene are not mere restatements of the rather vague shopworn dicta and shibboleths often found in books. They are honest attempts to be specific and helpful in the problems under attention.

In addition to being a very good delineation of the mental disorders of later life, their genesis, phenomena and treatment, the book continually draws attention to the problems posed by the increasing proportion of elderly people in the social life of the world. Only when we know more of the biology, pathology and sociology of ageing mankind shall we be able to claim some knowledge of the full capacities of man.

Bibliographies, some fine reproductions of histological changes in senility and cerebral arteriosclerosis and a good index complete a book that is timely and will be of interest and value to all physicians.

A. T. M.

EMOTIONAL FACTORS IN LEARNING. By *Lois Murphy* and *Henry Ladd*. (New York: Columbia University Press, 1944.)

This is a book written apparently for teachers to put over, or expand, the idea that good teaching can be therapeutic. Mrs. Murphy (her collaborator, the late Henry Ladd, did the case studies for the book rather than any synthesizing of the material) has chosen to develop her central theme by discussing first theoretically the various emotional factors in learning, placing great emphasis on the individual experience, make-up, and maturity of each student. She writes facilely, if somewhat discursively, interlarding her generous and idealistic concepts with many illustrative passages. It is pleasant, optimistic reading giving one the happy feeling that with proper coördination, a closely knit, mature faculty in a very flexible setting really can provide a significant growth experience for an individual college-age student.

The second half of the book is devoted to excellent case histories. These histories are particularly interesting since they are the story of a student as she develops from the teachers' point of view. Accessory people enter in, the Rorschach tester and the psychiatric adviser, but essentially the method of reporting is that of organizing and summarizing teachers' observations of the student to point up how a faculty can utilize and channelize 'emotional factors.'

This book is written by Sarah Lawrence faculty about what happens at Sarah Lawrence College, a small, select, wealthy school where an unusual number of facilities are available for each student. This fact does not invalidate the basic ideas expressed, but it does mitigate somewhat their direct applicability to general college situations. Although the average teacher may feel frustrated after reading this book, it is worth his perusal, not only to expand his potential teaching horizon, but to give him a point of view for dealing constructively with those students whose 'emotional factors' draw his attention to them as individuals even in a school where enormous classes are the rule and faculty coördination per student impossible.

HELEN H. ARTHUR, M. D.,
Johns Hopkins Hosp.,
Baltimore, Md.

NAVAHO WITCHCRAFT. By *Clyde Kluckhohn*. Papers of the Peabody Museum of Archæology and Ethnology, Harvard University. Vol. XXII, No. 2, 1944.

Dr. Kluckhohn's *Navaho Witchcraft* is a welcome addition to the growing literature concerning witchcraft belief and practice. A specialist's manual on such activity among the Navaho, this monograph should receive a warm reception from psychiatrists as well as ethnologists.

Divided into three sections this volume is weighed heavily in the direction of methodology. Recognizing the growing interest in witchcraft from the social, psychological and psychoanalytic point of view, Kluckhohn attempts to avoid the oversimplifications which have in the past disturbed and even antagonized many who have not fully accepted analytic technique. In Part I he critically analyzes his data in a manner which enables the reader to gain some insight into the difficulties of field work in "forbidden" areas of social practice.

His definitions and formal descriptions provide yardsticks for further comparative study.

In Part II Kluckhohn turns to interpretation of these data. In his own words: "We have seen what the facts are. Now—what do they mean? "Meaning" in science, consists primarily in showing that one fact bears not a haphazard but a determinate relationship to another fact or set of facts. Are there any uniform modes of relationship between the data bearing on Navaho witchcraft and the data on Navaho history; between witchcraft beliefs and practices and Navaho social organization, Navaho economy, Navaho value systems?"

From Navaho history Kluckhohn finds that there are periods which witchcraft changes and/or practice flared dramatically. This knowledge ties in with his discussion of anxiety and witchcraft. Probably the outstanding contribution which *Navaho Witchcraft* makes lies in Kluckhohn's careful use of some of the newer concepts in the culture and personality" field.

His discussion of *manifest* and *latent* function, *alpha* and *beta* press in connection with witchcraft practice serve well to implement his conclusions that while analytic technique and emphasis on the individual may reward us with interesting and even valuable hypothesis, the analysis of the development of personality and the study of the press of social events may in the long run provide us with greater insight.

The blind section of the monograph is a set of well chosen appendices which seem well to document the broad generalizations presented in Part II.

All in all, this is a good piece of work. Designed to discuss the particular manifestations of Navaho practice in order to shed light on more general problems of techniques of adjustment, Kluckhohn succeeds in clarifying a heretofore rather clouded issue and leaves the way open for considerable more work in this area.

Part II, the "meat" of the monograph, is easy and, at times, exciting reading. Parts I and III lack the continuity necessary for nontechnical interest. I believe that Kluckhohn's conclusions are valuable and make an interesting comparison to Fromm's *Escape from Freedom*. "Free will," "predestination," and witchcraft under this type of analysis may have much more in common functionally than we have been eager to admit before.

R. L. Birdwhistell, M. A.,
University of Toronto.

Foster Home Care for Mental Patients. By *Hester B. Crutcher*. (New York: The Commonwealth Fund, 1944.)

This excellent 199 page book is an outstanding contribution to the care and treatment of the mentally ill.

Chapter I "Family Care; Its Meaning and Values" discusses the advantages that may accrue to the patient when placed with foster families. "If family care had no values other than the satisfaction it gives to patients, it would have demonstrated its worth. It has given opportunities for growth and development in normal living to people long isolates and restrained because they have, for the most part, been dismissed or forgotten by a frightened or incensed public." Likewise there are advantages to the hospital in that space is made available for the acutely ill and for those requiring specialized treatment.

Administration costs and results of family care are set forth in Chapter II. The author stresses the importance of special legislation and the allocation of special funding by the state authorities. The costs vary according to the amounts paid for board in different localities and social service supervision afforded. Data are presented to indicate that the total cost of family care is cheaper than hospital care.

In Chapter III, it is shown that there are two groups for whom family care may be desirable—the continuous treatment type of patient and those wherein family care is used as a treatment measure to bring about expected permanent and total rehabilitation. This latter type is more expensive because of the necessity for social case work.

Selection of patients and selection of homes are discussed in the next two chapters. The author indicates that no patient with tendencies toward assaultiveness or self-destruction can be considered for family care; rural districts or semi-industrial communities preferably accessible to the hospital offer the best location. Methods of selecting patients for placement and the criteria for home selection are set forth.

In Chapter VI, "The Supervision of the Patient," there is pointed out the significant rôle played by the social worker in foster home care of mental patients entailing as it does an interpretation of the project to a community, the selection and evaluation of suitable homes, the imparting to the "caretaker" of an understanding of the patient, a knowledge of the patient's history before and during his hospital residence; and careful supervision after placement to assist in his adjustment through an interpretation of behavior and the instilling of encouragement and assurance.

Two methods of organizing family care—the Colony System and the District System—and the advantages of each are set forth in Chapter VII.

One entire chapter is devoted to case histories; and this is followed by an outline of suggested forms and procedures.

The Appendix describes programs and costs now effective in the United States. There also appears an extensive bibliography.

This contribution to psychiatry, covering the field as extensively and authoritatively as it does, should lead the way toward a new era in the care and treatment of our mentally ill and mentally defective; and, as Dr. Arthur Ruggles so aptly states in the Foreword, "institutions for the mentally ill may well use this volume as a handbook and guide for family care procedures and if we heed well all the lessons it can teach us we shall be equipped to make a distinct contribution to public education, financial conservation and human welfare."

Marjorie Keyes,
National Committee for
Mental Hygiene (Canada).

BORDERLANDS OF PSYCHIATRY. By *Stanley Cobb, M.D.* (Cambridge: Harvard University Press, 1944.)

The reviewer has used this valuable book to explore and illustrate the areas of psychiatry. Dr. Cobb's borderland includes the neurotic, the alcoholic, the epileptic and patients with some central nervous system damage, and the stammerers. Every rough estimate Dr. Cobb makes is full of interest and brings a certain definiteness into what has been vagueness. He does not take the reader to a borderland outside of his borderland where there are people with prejudice and amounts of anxiety which handicap them but do not entitle them to a disease.

The reader will find attractive discussions of the rôle of the hypothalamus and psychosomatics. In the chapter on psychoneuroses the medical reader will find some traces of direction toward the lay audiences of the Lowell Lectures. Neurosis diagrammed by one human nervous system facing another (inter-personal relationship) is a novelty. Like the rest of the book, the chapter on neuroses is tolerant, stimulating, original.

EARL D. BOND, M. D.,
Institute of the Pennsylvania Hospital,
Philadelphia, Pa.

THE HOPI WAY. By *Laura Thompson* and *Alice Joseph*. (The University of Chicago Press, 1944.)

This small volume forms an important addition to our already considerable literature on the Hopi Indians of northern Arizona. In 1540 Coronado found the Hopi living in the same semi-arid mesa country which they now occupy and from that time they have been in ever-increasing contact with various bearers of European culture. Despite this contact, much of Hopi life has remained intact and the Hopi today are among the few American Indian groups which lead recognizably distinct, non-European lives. It is for this reason that the Hopi have furnished a fruitful source of investigation and observation to both anthropologists and psychologists for a number of years.

The present book is a combination of these two disciplines under the joint authorship of Laura Thompson, an anthropologist and Alice Joseph, a psychiatrist. It is the first in a series to be published as the result of a three years' collaboration between the Indian Service and the Committee on Human Development of the University of Chicago. John Collier, former Commissioner of Indian Affairs, has written the foreword and the book gains interest in the light of a newly organized agency, the Institute of Ethnic Affairs, Inc., of which John Collier is president and on whose Board of Directors Laura Thompson's name appears. According to a pamphlet distributed from Washington, D. C., this Institute was created to develop "action-in-research" which "endeavors to bring to bear, and to bring within the scope of the lay citizen, all that science can discover and predict, concerning ethnic tensions, maladjustments, conflicts, or neglected group opportunities." There is little doubt that some of the principles thus described have been employed in this volume and that the methods used here will receive a fairly wide distribution. The method of research presented in *The Hopi Way*, therefore, deserves more consideration than might otherwise be given it.

Approximately one-half of the book is given over to an ethnographic description of Hopi life, which includes an extended account of the life cycle. There are few successful short descriptive ethnologies of this type in anthropological literature. Ethnological data as full as that which exist for the Hopi cover thousands of pages and it is difficult to reduce such copious and detailed material into a small space. Attempts in this direction are often correspondingly weak. Although persons thoroughly conversant with the Hopi literature will find errors in fact or in emphasis in this account, Miss Thompson is to be congratulated upon the authenticity of the picture of Hopi she furnishes in a few pages, particularly upon her intelligent use of historical materials.

After presenting eleven case histories of Hopi children, the remainder of the book is devoted to ten short chapters dealing with such subjects as the "Use of Tests as Tools," "Health, Food and Sickness," "The High Hopi I. Q.," "What Lies Below the Surface," "Hopi Hostility," etc. These short treatments by Alice Joseph are designed to cover the mental and emotional equipment with which the Hopi meet life and the stresses and strains which occur in the cultural setting as it exists at the present time. It does not seem possible to this reviewer to criticize in any way the intention of the scope suggested by such treatment. However, as indicated above, it becomes increasingly necessary, due to the importance of this book as an example of research to be followed in the future, to analyze rather carefully how well it achieves its avowed purpose.

Several statistical tables are appended which, on superficial examination, seem to indicate that the data have been statistically treated. On close examination this is found not to be the case. No full test scores or analyses are included, and the figures which do appear are given in percentages, many of them on a small number of cases. Because of the difficulty involved in getting an adequate sampling, it is not easy to apply statistical methods to small primitive groups. This has long been recognized as one of the stumbling blocks in the path of careful work with non-European peoples. Certain minimum requirements of exactness, however, are quite possible. Yet in the discussion of Hopi I. Q., figures for "white children" are compared with those of Hopi on two tests: the Grace Arthur Point Performance Scale and the Goodenough Draw-a-Man Test. In Table III the Hopi scores are broken down according to the home village of the child, *i.e.*, Oraibi and First Mesa are given separately (p. 101). On page 91 we find that the number of children given the tests varied from 92 Oraibi children (Grace Arthur) to 32 from First Mesa (Draw-a-Man). The table compares Oraibi

and First Mesa with "white children" on whom the Grace Arthur was standardized and with "White school children from an industrial Midwestern town" who took the Draw-a-Man test. In all the other tables in which comparisons are made between Hopi and white children, percentages are given simply for "Hopi" and "Midwest." Wayne Dennis administered Draw-a-Man tests to 152 Hopi children of First and Second Mesas in 1942 and no mention is made of these valuable check scores.[1] Both the number of cases and the test range are consistently omitted. In a paragraph preceding the tables the authors say of their tabular presentation:

> In presenting this kind of table, which from our abundant documentary material offers only a few items for illustrative purposes, we wish to point out again that interpretive conclusions are not based on the quantitative results of one test alone, but on the correlation of all test results, together with qualitative and cultural considerations (p. 145).

Although it becomes practically impossible to assess the value of a testing program reported upon in such fashion, this reviewer feels that it is quite within the right of the psychologist to use tests as interpretive tools so long as no misleading pseudo-statistics are suggested. Interpretations are based on other tests than the ones mentioned above, among them a particularly tantalizing set of projective tests including the Rorschach. Here again, the results are given to the reader in the same tabular form, without correlation figures, without accurate recording, but with chapters of interpretive comment. Interpretation is fully justified and insights may be of extreme value. Scientific data cry out for valid interpretation upon which sound social science programs may be based. We need "action-research." It is, therefore, all the more disappointing, after over half a century during which anthropologists have dwelt on the general point of human mental equality and after such elaborate preliminaries, to find this as the concluding paragraph to the discussion of the high Hopi I. Q.:

> "From our tests we have the impression that Hopi children on the average are very intelligent, highly observant, show a remarkably balanced mental approach and are apparently very capable of complex and abstract thinking. Mental activity appears even overemphasized to a certain extent, and we shall see later its influence on the balance of the whole personality. We have also the impression that these qualities are closely connected with Hopi culture and the training which the children received at home and through the community. In dealing with the Hopi it would indeed be a grave mistake to adopt the baby-talk and oversimplified methods which are often used toward half-witted persons and those who go under the collective name of 'natives'" (p. 101).

As indicated above, the book also includes eleven Hopi case histories. Case studies are of such extreme importance in the analysis of emotional and social adjustment that their value can hardly be overemphasized and the need of complete case histories for primitive peoples is very great indeed. In discussing 15-year-old Ellen, the account begins "Ellen belongs to a conservative Hopi household which can be called average with respect to its members' general way of life, their economic conditions and their social position in the village." Further on we read, "The father . . . . is the Don Juan of the community, openly talked about, appraised and criticized as such" and "the mother . . . . is very sloppy, and her household is considered the least clean in the village" (p. 69). Although one believes he knows what is meant by this apparent contradiction, one wonders if such reporting can yield wholly reliable materials.

The reviewer finds herself in an anomalous position. She is convinced that most of the generalizations in the psychological portions of this book are valid, yet she finds the data and evidence which support them either lacking or inadequate. The insights and comments do add to our knowledge of the Hopi Indians. There is a real feeling for reaching out and making use of clues from all the social science techniques. Yet the generalizations seem not much more elaborate than could have been evolved by any mature anthropologist with control of the literature and a feeling for Hopi life. The psychological tools are used almost entirely for window-dressing. Data are used illustratively but no generalization seems to stem directly from carefully controlled data. The authors have forestalled criticism by closing their accounts thus "a fair, over all evaluation of the method and findings of the research can be made only in the context of its total results, including their practical application to administrative problems, the ultimate goal toward which this study and the forthcoming tribal analyses, are oriented" (p. 133).

Perhaps this is so. Perhaps also a portion of the difficulty lies in the fact that the book is apparently aimed at an audience not clearly defined in the authors' minds. At times both phraseology and treatment are scientific, aimed at an audience of considerable experience and information in the social sciences. At other times the language is that which is normally found only in over-popularized accounts and the thinking is similarly oversimplified: the audience then seems to be a group of wholly untrained laymen, well-meaning but ignorant. It is quite possible, therefore, that criticisms given here belong not so much to the working methods of the authors as to their presentation. Certainly the program promises rich rewards and nothing can detract from the basic importance of the authors' thesis that psychological and cultural phenomena should be studied together.

MARIAN W. SMITH,
Columbia University, New York.

[1] This reference is included here since it does not appear in the Thompson-Joseph bibliography: "The Performance of Hopi Children on the Good-enough Draw-a-Man Test," *Journal of Comparative Psychology*, Vol. 34, No. 3, Dec. 1942.

DISEASES OF THE NERVOUS SYSTEM IN INFANCY, CHILDHOOD AND ADOLESCENCE (Second Edition). By *Frank R. Ford, M. D.* (Charles C. Thomas. Springfield, Ill.: 1944.)

This standard book now in its second edition contains eleven hundred pages. Primarily, it is written for pediatrists and not for neurologists since the orientation is entirely pediatric. The result is an encyclopedia of nervous diseases for pediatrists and as such it is a valuable reference work.

Since the author has endeavored, and with success, to include everything that bears on nervous disease from infancy to adulthood there is much described that is only remotely connected with nervous disease. Likewise, as is necessary in a book with such a broad scope, each disease description is concise or even curtailed. The author has compensated for this by appending to each section a short list of references for those who may desire more information. These references on the whole are well chosen and reflect a wide range of reading.

The long introductory section on embryology, anatomy and physiology of the nervous system could not be complete enough to be of great value. One finds even a sketchy survey of Brodman's cerebral architectonics which does not seem to be quite in place. A considerable section is devoted to the epidemic encephalitis of von Economo, a disease which has just about disappeared from our clinics. Of course it may return and if it does this section will not appear so superfluous. One regrets that no mention is made of the virus of poliomyelitis in faeces and sewage. A neurologist is shocked by the statement that in the treatment of epilepsy "bromides . . . . probably are as effective as any other medication." That surely is not the experience of most neurologists.

This book is not a text book but as an encyclopædia it fills a definite place. This neurological reviewer expects to have occasion to refer to it not infrequently.

LOUIS CASAMAJOR, M. D.,
The Neurological Institute, New York.

OUR INNER CONFLICTS. A Constructive Theory of Neurosis. By *Karen H. Horney, M. D.* (New York, W. W. Norton and Company, Inc., 1945.)

Ever since Freud introduced us to psychoanalysis, the field of psychotherapy has been colored and, to a considerable extent more recently, dominated by the principles and tenets arising from the experience of practitioners in that field. Gradually in the course of time, divergences have appeared until at present, with respect to therapy, two main points of emphasis have become manifest. On the one hand, the more orthodox stress the importance of uncovering the deepest layers of the unconscious where it is held there reside the factors which create difficulty for the individual. The less orthodox, on the contrary, attach primary significance to what is actually going on in the patient at the time he is under treatment. Concern is focussed upon what now exists rather than how it happened to get the way it is. No practitioner of psychoanalysis would admit a blind adherence to one or the other point of view, but it is generally clear where their sympathies lie. Doctor Horney is no exception. She clearly belongs to the ranks of the less orthodox.

This fact must be kept in mind in evaluating her new book. It is a discussion of current unconscious activities and as such must be either accepted or rejected.

To this reviewer whose personal predilections cause him to favor Doctor Horney's position, she does a superlative job of making real much that goes on in the unconscious life. Her description of major trends and efforts at solution are brilliant and always ring of keen clinical observations.

Moreover, she has progressed in her thinking and now furnishes us with some new terms for old concepts, thereby throwing added light upon them. For instance, instead of superego she employs the terms idealized image and despised image, thus centering upon current unconscious attitudes rather than losing the patient in the mists of his earliest parental tieups where he can feel no responsibility for changing. Similarly, she substitutes the term externalization for projection and thereby enlarges the concept of projection to cover not only "the objectifying of personal difficulties" but also the objectifying "to a greater or lesser degree all feelings." Throughout the book, in much the same fashion she brings fresh insights to old ideas.

In short, Doctor Horney shines as a clinician and this book constitutes further and ample proof of that fact. Unfortunately, as a theoretician she does not shine so brightly. Content with absorption in current goings-on and convinced that somehow therapy results from unravelling these conflicts, she fails to establish the legitimacy of her position and leaves herself open to the charge of being superficial. On page 47, at the end of her chapter entitled "The Basic Conflict," she writes "My contention is that the conflict born of incompatible attitudes constitutes the core of neurosis and therefore deserves to be called basic." This definition sidesteps completely the essential nature of the incompatible attitudes as does the entire chapter or, for that matter, the entire book. As a consequence, we are confronted with a book, stimulating to read but leaving one with an uneasy feeling that much has been left unsaid. If she had faced more forthrightly the issue of the origin of these incompatible attitudes, she would have materially strengthened her position.

In the eyes of this reviewer, if she had wished, she could have legitimately avoided any attempt to answer the question of origins by simply saying "I don't know" and by adding that somehow something transpires during the early years which results in the development of these attitudes and the creation of a state of conflict. It would then be possible to say, that, regardless of the source of the original conflicting trends, it is the disentangling of the resulting conflicts which produces relief of symptoms. That is her actual stand and,

as a clinician of many years' experience, she is warranted in assuming it. She believes her results back her up.

The reviewer confesses to a disappointment in the book. Although neither in title nor subtitle did he have the right to expect it, he looked in vain for any enlightenment upon the problem of therapy or why she felt her approach afforded advantages above and beyond those offered by the orthodox attack. Perhaps in her next book she will reveal her thought about the actual therapeutic process. As she intimates but never comes to grips with, it must be more than the mere unravelling of conflicts. We await with interest what she has to say along these lines.

HARRY M. TIEBOUT, M. D.,
Blythewood, Greenwich, Conn.

TEXT BOOK OF NEUROPATHOLOGY, 2nd Edition. By *Arthur Weil, M. D.* (New York: Grune and Stratton, 1945.

The second edition of this book, after an interval of 12 years, is welcome. The author has increased the number of illustrations in this new edition and the book is consequently slightly increased in size.

The fundamentals of the subject are admirably described and illustrated. The chapter on Injuries could be enlarged to include, for instance, an adequate account of chronic traumatic subdural hæmatoma. "Berry" aneurysms and the importance of their rupture in the causation of spontaneous subarachnoid hæmorrhage are also omitted.

The tables in the Appendix are very valuable.

The book is well printed on good paper, which enhances the value of the illustrations.

ERIC A. LINELL, M. D.,
University of Toronto.

SEPTEMBER REMEMBER. By *Eliot Taintor.* (New York: Prentice-Hall, Inc., 1945.)

This book was written by an anonymous author for the lay reader. The unfortunate claim is implied that the fellowship of "Alcoholics Anonymous" has all the answers to basic questions on alcoholism and alcoholics. The information in the book does not do justice to this movement or to the psychiatrist who is only casually mentioned. To quote from the book: "It is a source book of authentic information about "Alcoholics Anonymous," "September Remember" will, I believe, play an active part in rehabilitation." The book is poorly written, unnecessarily common almost to the point of vulgarity. Again to quote: "to them it shows . . . . with power and vividness, with wit and lustiness, how alcoholics, who want to stop drinking, can; it shows how alcoholics give each other a helping hand no one else can; not the psychiatrist, not the reformer, not the non-alcoholic lover." Not one alcoholic, questioned by the examiner, had a constructive word to say for this book. True, the author depicts the camaraderie and the amateur social service work of tremendous value; but he confuses the reader in detailing the career of Joe Wales, who utilizes the activities of Alcoholics Anonymous, the psychiatrist, and a sanitarium. The author solves the conflicts due to the eternal triangle, by having the girl, an A. A., commit suicide. Joe Wales then is brought back to the fold of the patient Alcoholics Anonymous group, after, however, his wife returns to him.

Some of the activity of the Alcoholics Anonymous is depicted in a superficial manner while the serious, cooperative spirit of the group portrayed in its text, "Alcoholics Anonymous," is not revealed.

Unfortunately, the reader will have to turn to other works of the Alcoholics Anonymous group and writings of the psychiatrists as well, to determine the real worth of the Alcoholics Anonymous, which is incontestable.

JOHN A. LARSON, M. D.,
Blythewood, Greenwich, Conn.

THE NAVAHO DOOR. An Introduction to Navaho Life. By *Alexander H. Leighton* and *Dorothea C. Leighton.* (Cambridge: Harvard University Press, 1944.)

We Americans usually think of ourselves as being keenly interested in the welfare of other people less fortunate than we are, but oddly enough we have never paid a great deal of attention to the conditions and needs of the most alien race that is living within the borders of our country, the American Indian. This is perhaps due to the fact that they are more or less remote to us. Having been administered to by a governmental commission ever since the days that we were a group of colonies and we have assumed that these commissions as a whole have done a capable piece of work. Unfortunately this is not so, and it wasn't until Mr. John Collier was appointed Commissioner of Indian Affairs by President Roosevelt about 1932 that this agency did very much about giving the Indians a constructive program that would assist them in becoming a self sufficient people. While this program is far from being finished they are gradually learning the benefits of preventive medicine along with soil erosion control and other important economic factors. There is no need to go into the outrageous persecutions they have undergone in the past at the hands of incompetent and unscrupulous Federal Agents and the aggrandizing white pioneer, because that is something that most of us are fully aware of and indifferent to. Most of this indifference can be attributed to the fact that the majority of the books written on the American Indian have been written by sentimentalists who have been overenthusiastic or those who have written from a factual or statistical viewpoint. This book is fortunate in striking a happy medium and to be written in a style that is both pleasant and authoritative. The authors have spent considerable time working with the Navahos in the government hospitals on the Navaho Reservation in Arizona and have done much to promote a better understanding between the Indians and the whites as well as performing their regular medical duties. This has been accomplished,

largely, through their understanding of the importance of the "Medicine Man" as a religious factor and securing his cooperation whenever possible, in dealing with the patient; something that is not always done by those who are working with an alien race. The book represents considerable research, on the part of the Leightons, not only in the fields of medicine and anthropology but also in the historical, social and economic aspects as well. Mr. John Collier, in his foreword to the book, recommends it to all those who are contemplating entering the Indian Service, but it can also be invaluable to anyone who intends to work with any other primitive people.

W. R. Dunton, III,
Baltimore.